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ABSTRACT

The opinions of senior high school social studies and science teachers concerning use of free materials sponsored by Michigan's Consumer Power Company (CPC) are reported. The study was concerned with teacher assessment of sponsored materials and factors which may have an affect upon the use of the materials with their classes. Opinionaires were mailed to principals of all private and public high schools in Michigan who were on the mailing list for CPC's catalog of free and inexpensive teaching materials. The mailings also included opinionaires which the principals were asked to distribute to social studies and science teachers. The response rate was 37%. The study revealed a positive attitude toward and acceptance of the educational materials. Teachers welcomed the sponsored materials, provided they were unbiased and relatively free of advertising. No specific recommendations were made at this time, because this study is only the first in a series of six to be undertaken. The opinionaire and responses are included in the appendices which make up over half the report. (RM)

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A STUDY OF TEACHERS' AND PRINCIPALS' VIEWS OF SPONSORED EDUCATIONAL MATERIALS THAT MAY BE PROVIDED SCHOOLS BY CONSUMERS POWER COMPANY

Part V: High School Social Studies and Science Teachers

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TABLE OF CONTENTS

CHAPTER PAGE

I. THE PROBLEM, PROCEDURES, AND DEFINITIONS OF TERMS USED 1

Background 1

Introduction 1

Importance of the Study 3

Methods of Procedure and Sources of Data . . 4

Obtaining the Sample 4

Design of the Opinionaire 5

Limitations of the Study 6

Definitions of Terms Used 6

Reading this Report 7

II. PRESENTATION AND ANALYSIS OF DATA 8

Mailing and Receipt of Opinionaires 8

Analysis of the Data 10

Professional Organizations 10

Years of Experience 11

Use of Materials 11

Use of CPC Materials 14

CPC Catalog Awareness 15

Administrative Encouragement 16

Teacher Use of Materials 18

Materials Desired 21

Features Desired 24

Materials Preference Ranking 24

CHAPTER PAGE

ANALYSES OF PARTICULAR INTEREST TO ESP 28
    Energy Conservation 28
    Michigan Economic Development Program 30
    Rate Structure of Regulated Industries 32
    Nuclear Fission to Produce Electric Energy 34
    Acid Rain 35
    Summary 37
III. SUMMARY, FINDINGS AND CONCLUSIONS 38
  Summary 38
    The Problem 38
    Design of the Study 39
  Findings 40
  Conclusions 41
  Recommendations 42
BIBLIOGRAPHY 43
APPENDIXES 45
  Appendix A - Opinionaire, Follow-up Postcards . . . 45
  Appendix I/ 1 - Remarks, Question 4 1-5
  Appendix I/ 4 - Remarks, Question 5 1-4
  Appendix I/ 3 - Remarks, Question 6 1
  Appendix I/ 4 - Remarks, Question 7 1-7
  Appendix I/ 5 - Remarks, Question 8 1
  Appendix I/ 6 - Remarks, Question 9 1
  Appendix I/ 7 - Remarks, Question 10 1

CHAPTER PAGE

Appendix I/ 8 - Remarks, Question 12 1-5
Appendix I/ 9 - Remarks, Question 13 1-3
Appendix I/10 - Remarks, Question 14 1-4
Appendix I/11 - Remarks, Question 15 1-4
Appendix I/12 - Remarks, Question 16 1-3
Appendix I/13 - Remarks, Question 17 1-3
Appendix J/ 1 - Remarks, Question 4 1-6
Appendix J/ 2 - Remarks, Question 5 1-6
Appendix J/ 3 - Remarks, Question 6 1-3
Appendix J/ 4 - Remarks, Question 7 1-2
Appendix J/ 5 - Remarks, Question 8 1
Appendix J/ 6 - Remarks, Question 9 1
Appendix J/ 7 - Remarks, Question 10 1
Appendix J/ 8 - Remarks, Question 12 1-6
Appendix J/ 9 - Remarks, Question 13 1-3
Appendix J/10 - Remarks, Question 14 1-3
Appendix J/11 - Remarks, Question 15 1-5
Appendix J/12 - Remarks, Question 16 1-4
Appendix J/13 - Remarks, Question 17 1-5

LIST OF TABLES

Table — Page

1SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS TO INITIAL AND FOLLOW-UP MAILING OF OPINIONAIRES AND "PROD" CARD . . . 9

2SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS (Question 2) 10

3SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING YEARS OF TEACHING/ADMINISTRATIVE EXPERIENCE (Question 3) 12

4SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING USE OF SPONSORED MATERIALS WITH CLASSES (Question 4) 13

5SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING USE OF CPC/ESP SPONSORED MATERIALS WITH CLASSES (Question 5) 15

6SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING AVAILABILITY OF CPC/ESP 1982-83 GUIDE TO TEACHING RESOURCES CATALOG (Question 6) 16

7SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING ADMINISTRATIVE ENCOURAGEMENT OF USE OF SPONSORED MATERIALS (Question 7) 17

8SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING USE PRESENTLY MADE OF SPONSORED MATERIALS (Question 8) 19

9SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING TYPES OF MATERIALS DESIRED BY TEACHERS (Question 9) 22

10SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING TYPES OF MATERIALS DESIRED BY TEACHERS (Question 10) 25

11SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING TYPES OF MATERIALS PREFERRED - RANK ORDER INFERRED (Question 11) 27

12SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH ENERGY CONSERVATION (Question 12) 29

Table Page

13SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH THE MICHIGAN ECONOMIC DEVELOPMENT PROGRAM (Question 13) 31

14SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH THE RATE STRUCTURES OF REGULATED INDUSTRIES (Question 14) 33

15SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH THE USE OF NUCLEAR FISSION TO PRODUCE ELECTRIC ENERGY (Question 15) 34

16SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH THE ECOLOGICAL FACTORS INVOLVED IN THE "ACID RAIN" PROBLEM (Question 16) 36

CHAPTER I

THE PROBLEM, PROCEDURES, AND DEFINITIONS OF TERMS USED

BACKGROUND

Introduction. For approximately the last half century there has been a great quantity of sponsored (free and inexpensive) educational materials available to teachers for use with their classes. These teaching aids, usually used to supplement existing materials, have taken the form of books, pamphlets, films, film strips, cut-outs and mobiles, cassette recordings, and most recently video cassette recordings. On the horizon and fast approaching (present in a few isolated cases) is the advent of the provision of software for schools' computers. These sponsored (free) materials have been, and continue to be provided at no cost, or at minimal cost, to teachers and school districts. These teaching materials are provided by local, state, and national government agencies, industry, business, trade associations, and not-for-profit organizations.

The number and type of catalogs which list materials provide ample evidence of the immense volume of sponsored (free) supplementary materials available to educators. Probably the most extensive and comprehensive series of catalogs is that series of guides published annually (in time for the opening of school each fall) by Educators Progress Service, Randolph, Wisconsin. This series lists free (sponsored) pamphlets, bulletins, films, film strips, tape and video cassette recordings. These are catalogued by both the discipline area as well as the media type. It is extremely comprehensive and appears to be the most widely distributed source nationally available to educators.

Another publication which must be mentioned is the biennial publication *Free and Inexpensive Learning Materials* compiled and published by the staff of George Peabody College for Teachers, Vanderbilt University, Nashville, Tennessee. This favorite of teachers has been in existence for over 40 years. Today it is distributed by Incentive Publications, Inc., also of Nashville.

A comparative newcomer to the field is the serial publication *Freebies*, published nine times yearly. It has been in existence for six years and lists materials of general interest. It enables the reader to "keep up" with available publications between the times when the annual publications come out.

Industry trade associations also publish catalogs which are of great value to teachers. These catalogs and listings of materials tend to vary in their availability, coming and going over the years. One example of this type of catalog was that published by the American Gas Association. This catalog was, in the past, provided to teachers who then ordered materials developed by the Association. These materials were then provided on behalf of the member companies.

Further, articles and monthly columns have appeared in trade magazines and similar publications informing teachers of the availability of the most current supplementary (free) materials. These usually contain a postal reply card on which the user may circle one or more numbers to obtain samples of the desired materials. However, in many cases these materials tend to be more directed toward advertising matter than educational content. Journal articles also appear from time to time informing readers (teachers) of the availability of selected materials in specific discipline areas (e.g. Vanaria's column in Social Education).

Consumers Power Company (CPC), with headquarters in Jackson, Michigan, has for the last fifteen years provided teachers in their distribution area (The State of Michigan, excluding Detroit, and the Upper Peninsula) with copies of their catalog of supplementary (free) materials. This catalog is titled ESP Guide to Teaching Resources and published annually, being distributed in mid-October, near the beginning of the school year. Periodic mailings, informing teachers of items of special interest, are made during the school year to selected groups of teachers. These teaching resources have gained a high degree of acceptability among the teachers using them in the company's distribution area. (See Bibliography for a listing of studies conducted earlier.)

Importance of the Study. Industry in general, and CPC in particular, has long been interested in what types of curricular materials teachers want developed for use in their classrooms. Today, because of budgetary constraints, teachers are being subjected to more pressure to bring outside sponsored (free) resources and materials into the classroom. This study was intended to add to the body of knowledge dealing with teachers desires for supplementary curriculum materials that they might use with their students -- if such materials were to be developed and distributed by CPC to teachers within their distribution area. This study was developed in conjunction with CPC personnel. Certain sections were modeled after Netzer's study The Use of Industry Aids in Schools (1952). The sample for this study was drawn from those schools serviced by CPC within their distribution area, using mailing lists compiled by the company.

METHODS OF PROCEDURE AND SOURCES OF DATA

The purposes of this section were to describe: (1) the methods used in obtaining the sample for the study; (2) the design of the opinionaire; and (3) the statistical treatment of the data.

Obtaining the Sample. A complete set of mailing labels used for the distribution of their catalog each fall was obtained. This list was basically broken down into five (5) major classifications. These were:

1 = Public Elementary Schools

2 = Private Elementary Schools

3 = Junior High/Middle Schools (not identified public/private)

4 = Private High Schools

5 = Public High Schools

Opinionaires, containing a cover letter (See Appendix A) were mailed to the principals of all high schools within the CPC distribution area. These mailings also included two additional opinionaires enclosed in a self-addressed, stamped envelope addressed to the SOCIAL STUDIES and SCIENCE teachers. The principal was asked to distribute these to his* teachers, as well as complete an opinionaire himself. A follow-up postal card was mailed approximately four to six weeks later to those teachers and principals who had failed to respond to the initial request for information. (See Appendix A)

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* The masculine form will be used in all cases to avoid awkward sentence construction.

Design of the Opinionaire. The initial opinionaire design was that used in the 1979 study conducted for CPC (DuVall and Krepel, 1979, ED 215 938). This opinionaire was modified to meet the needs of the CPC officials for up-to-date informtion. Additional modifications were made to aid in making comparisons with Netzer's data. This study then, is one of several similar studies being conducted for CPC which will present and compare the opinions of the following groups of educators: (1) Lower Elementary Teachers; (2) Upper Elementary Teachers; (3) Elementary Principals; (4) Junior High School Social Studies and Science Teachers; (5) **Senior High School Social Studies and Science Teachers**; and (6) Junior High and Senior High School Principals.

The purpose of the questions asked was to elicit the following information: (1) the teaching position of the respondent; (2) membership(s) in professional organizations; (3) years of both teaching and administrative experience; (4) use of sponsored (free) materials with classes; (5) use of sponsored (free) materials provided by CPC; (6) awareness of CPC's resource catalog; (7) administrative encouragement for use of sponsored materials; (8) use(s) presently being made of sponsored materials (adapted from Netzer); (9) determination of types of materials considered to be most useful (adapted from Netzer); (10) features the respondent would like to see in future sponsored materials (adapted from Netzer); (11) determination of a relative rank ordering of the different types of materials respondents would like to see CPC provide, based upon those materials already being provided (ESP Catalog listing used as basis); (12) a determination of the respondents opinions regarding five broad subject areas of potential materials development activity for CPC's ESP program within the next five years. Finally, respondents were asked for their suggestions for improvement in any areas not previously covered.

Treatment of the Data. All data were analyzed and reported as a per cent of the total (usable) replies received to the opinionaires originally mailed (less post office returns and unusable responses).

LIMITATIONS OF THE STUDY

The limitations of any investigation conducted by the use of normative survey techniques existed in this study. A further limitation resulted from the fact that the reliability of the data depended upon the accuracy with which the respondents (in this case, senior high schools teachers of social studies and science) completed the instrument. Finally, the teachers opinionaires were included in the mailing to principals, therefore the distribution of the instruments depended upon a third party (principal).

DEFINITIONS OF TERMS USED

Free (Sponsored) Materials. Instructional materials available at no cost to the teacher or school system, or at a cost that only includes postage (i.e. return of films). Usually obtained from business, industry or government agencies. These materials may be referred to by other terms such as phantom, ephemeral, or vertical file materials.

Others. All other terms were defined as stated in Good's *Dictionary of Education* (1973) or Morris' 1975 edition of *The American Heritage Dictionary of the English Language*.

READING THIS REPORT

The balance of this report is organized into two major sections. The first, PRESENTATION AND ANALYSIS OF DATA, presents the pertinent findings of this part of the overall study, based upon the teachers' responses (senior high school social studies and science) to the several questions contained in the opinionaire. In addition to presenting the data, organized in the form of tables, reference was also made to selected comments received from the teachers queried (noted in Appendixes I and J, not contained in the study provided at the Electric Utility Educators Conference, May 25-26, 1983, Kansas City, Missouri). Each comment has following it a footnote which locates it in the appendix by page number within question number as well as an individual identification number for each opinionaire (respondent).

The final section of this report, titled SUMMARY, FINDINGS AND CONCLUSIONS is drawn from the analysis of the data. This section is followed by a bibliography of pertinent materials. Finally the study contains the appendixes which contain appropriate materials to support the body of the study.

CHAPTER II

PRESENTATION AND ANALYSIS OF DATA

The purposes of this chapter were to present the results of the analysis of the data of (1) the mailing and the return of the opinionaire, and (2) the data obtained from the answers received to the questions posed in the opinionaire.

MAILING AND RECEIPT OF OPINIONAIRES

The opinionaires were enclosed, together with a covering letter (Appendix A, pp. 45-49) in an envelope addressed to each senior high building principal in the CPC distribution area. These instruments were mailed on October 15, 1983. The follow-up postal card (App. A, p. 49) was mailed approximately four to six weeks later (because of the large number processed no exact mailing date can be given). Mailings were made to principals of all public and private high schools (as defined by CPC's mailing codes 4 and 5). The per cent of receipts was determined after adjustments for returns by the postal service and receipt of opinionaires that could not be used (blank, notes made on body, incorrect coding, etc). A complete analysis of these data is presented in Table 1. An overall response ratio of 37 per cent was received. It should be noted that the number of responses from the private sector schools (predominantly religiously affiliated) precluded their separate analysis, without going into small sample procedures. It was not believed that this was either necessary or wise, particularly in view of the number of responses received from the public sector as well as the possibility of combining these responses and simply referring to them as senior high school teacher responses. These data are presented in Table 1 SH (Senior High).

TABLE 1SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS TO INITIAL AND FOLLOW-UP MAILING OF OPINIONAIRES AND "PROD" CARD

Analysis of Returns		Social St.		Science		Total	
		f	%	f	%	f	%
Initial Mailing (10-15-83)	Public	549	85	549	85	1098	85
	Private	95	15	95	15	190	15
	Total	644	100	644	100	1288	100
Returned by Post Office	Public	2	--	2	--	2	--
	Private	4	--	4	--	4	--
	Total	6	--	6	--	6	--
Received but Unusable	Public	20	--	14	--	34	--
	Private	6	--	5	--	11	--
	Total	26	--	19	--	45	--
Possible Receipts	Public	527	--	533	--	1060	--
	Private	85	--	86	--	171	--
	Total	612	--	619	--	1231	--
Actual Receipts	Public	187	35	213	40	400	38
	Private	25	29	31	36	56	33
	Total	212	35	244	39	456	37

Because of the overall response rate of 37 per cent it is believed that generalizations can be drawn to the population of both high school social studies and science teachers teaching within the CPC distribution area. In all cases the number of responses is sufficiently large that generalizations drawn to the population of Michigan high school social studies and science teachers as a whole.

ANALYSIS OF THE DATA

Professional Organizations. The teachers were queried concerning their membership in professional organizations commonly held by persons in their fields. As will be noted in Table 2SH a vast majority of the respondents are members of the Michigan Education Association and the National Education Association.

TABLE 2SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS (Question 2)

	Social St.		Science		Total	
Name of Organization	f	%	f	%	f	%
Nat'l. Educ. Assn.	155	83	170	80	325	81
Michigan Educ. Assn.	161	86	173	81	334	84
Nat'l. C. Soc. St.	36	19	1	-1	37	9
Mich. C. Soc. St.	30	16	1	-1	31	8
Natl. Science T. Assn.	2	1	63	30	65	16
Mich. Science T. Assn.	1	-1	68	32	69	17
Am. Fed. Teachers	5	3	9	4	14	4
Mich. Fed. Teachers	5	3	9	4	14	4
Others	23	12	23	11	46	12

Note: Multiple responses were received in many cases. Totals exceed 100 per cent.

One interesting fact which appeared in the data was the much larger percentage of science teachers who belonged to their discipline organization (NSTA 30 per cent and MSTA 32 per cent) than did the social studies teachers (NCSS 19 per cent and MCSS 16 per cent). Replies to the other categories were negligible.

The "others" category spread the teachers responses over more than 30 different organizations.

Years of Experience. When the teachers were queried about the years of teaching and administrative experience they possessed the respondents' answers showed that they are an "experienced" group. Half of the respondents reported having between 11 to 20 years experience while over one-fourth of them responded that they had been teaching between 21 to 30 years. This may not be surprising in view of the reductions in force taking place in the teaching field and the "tight" market now in existence. This experience factor should be kept in mind when analyzing responses to later questions. To put it another way these are the persons who have been in the classroom well over half of an expected career.

A very small per cent of the respondents reported having administrative experience. This is somewhat surprising in view of the high turnover rate among (chief) school administrators. In excess of nine of ten of the respondents ignored the "administrative experience" category on the opinionaire. These data are presented in Table 3SH.

Use of Materials. Respondents were then asked about their use of free (sponsored) materials with their students. These data are presented in Table 4SH.

Nearly nine of every ten respondents (86 per cent) responded that they did use sponsored materials with their classes. Only 6

TABLE 3SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING YEARS OF TEACHING/ADMINISTRATIVE EXPERIENCE (Question 3)

Experience Range of Years		Social St. f	Social St. %	Science f	Science %	Total f	Total %
1 - 3	Teaching	--	--	5	2	5	1
	Admin.	2	1	--	--	2	-1
4 - 7	Teaching	6	3	10	5	16	4
	Admin.	4	1	4	2	8	2
8 - 10	Teaching	16	8	25	12	41	10
	Admin.	1	-1	--	--	1	-1
11 - 20	Teaching	97	52	101	47	198	50
	Admin.	2	1	1	-1	3	-1
21 - 30	Teaching	54	29	49	23	103	26
	Admin.	2	1	1	-1	3	-1
31 - 40	Teaching	7	4	13	6	20	5
	Admin.	2	1	--	--	2	-1
41+	Teaching	--	--	--	--	--	--
	Admin.	--	--	--	--	--	--
No Resp.	Teaching	7	4	10	5	17	4
	Admin.	174	95	207	97	381	95
Totals	Teaching	187	100	213	100	400	100
	Admin.	187	100	213	100	400	100

TABLE 4SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING USE OF SPONSORED MATERIALS WITH CLASSES (Question 4)

Use Indicated		Social St. f	Social St. %	Science f	Science %	Total f	Total %
Yes	Public	155	83	189	89	344	86
	Private	21	84	27	87	48	86
	Total	176	83	216	89	392	86
No	Public	12	6	8	4	20	5
	Private	4	14	3	10	7	13
	Total	16	8	11	5	27	6
Not Sure	Public	7	4	1	-1	8	2
	Private	--	--	1	3	1	1
	Total	7	3	2	-1	9	2
No Response	Public	13	7	15	7	28	7
	Private	--	--	--	--	--	--
	Total	13	6	15	6	28	6
Totals	Public	187	100	213	100	400	100
	Private	25	100	31	100	56	100
	Total	212	100	244	100	456	100

per cent responded that they did not use such materials. Several remarks tend to support these figures:

> I'll use anything to help the students' understanding. (I-1/01, 550002)
>
> Adds to the textbook material, also is a good change of pace. (I-1/02, 550048)
>
> Because they covered areas in greater depth than did the text and/or no text materials were available. (I-1/02, 550090)
>
> I teach Mich. hist. & much free material is excellent. (I-1/03, 550106)
>
> We developed an Energy Conservation class. The materials provided by Consumers are invaluable to the course. (J-1/01, 460006)

The one theme that kept running through the remarks in this particular section was the fact that the materials were "free" and that school budgets were limited. However, a number of remarks pointed out that the materials must also meet curricular needs before they would be used.

Use of CPC Materials. The teachers were asked if they used CPC's educational materials with their classes. Here the responses showed that 63 per cent of them did so, which means that nearly one-fourth of the potential audience of "free materials users" are not using CPC's offerings. An examination of the remarks tend to show that availability may play a part in this, and this fact may have to do with the availability of 16mm films (within budgetary limitations).

Typical remarks are presented below:

Too difficult to obtain on specified dates. (I-2/01, 550034)

They are appropriate and available *most* of the time. (I-2/01, 5500490)

I have used CP films in the past. They are well done and do *not* attempt to let the viewer know about CP every minute. (I-2/02, 550074)

Wasn't aware of their availability. (I-2/02, 550101)

Availability. (J-2/02, 560044)

Excellent presentation of commercial applications of science and technology. Useful, well planned teacher guides are also available. (J-2/03, 560066)

Only when it is available and covers related topic. Often these do not occur at the same time. (J-2/04, 560133)

One theme which kept running through this set of comments was that the respondents were not aware, or recently became aware, of the availability of the ESP materials. These data are presented in Table 5SH.

TABLE 5SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING USE OF CPC/ESP SPONSORED MATERIALS WITH CLASSES (Question 5)

Use Indicated		Social St.		Science		Total	
		f	%	f	%	f	%
Yes	Public	96	51	155	73	251	63
	Private	15	60	20	64	35	63
	Total	111	52	175	72	286	63
No	Public	72	39	43	20	115	29
	Private	10	40	7	23	17	30
	Total	82	39	50	20	132	29
Not Sure	Public	10	5	7	3	17	4
	Private	--	--	3	10	3	5
	Total	10	5	10	4	20	4
No Response	Public	9	5	8	4	17	4
	Private	--	--	1	3	1	2
	Total	9	4	9	4	18	[illegible]
Totals	Public	187	100	213	100	400	100
	Private	25	100	31	100	56	100
	Total	212	100	244	100	456	100

CPC Catalog awareness. The awareness level of the availability of the CPC/ESP 1982-83 Guide to Teaching Resources catalog was expressed by only slightly over half of the respondents (53 per cent). Again, when contrasted with those respondents who said thet they used sponsored (free) materials with their classes (Table 4SH, p. 13) there is a "gap" of one-third of the respondents. This may imply that the catalog delivery system needs to be examined. These data are presented in Table 6SH.

The teachers' remarks are quite revealing:

Would like to receive a copy. (I-3,01, 550005)

Our copy is in the library. I would like to have a personal copy of it. (I-3/01, 550065)

TABLE 6SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING AVAILABILITY OF CPC/ESP 1982-83 GUIDE TO TEACHING RESOURCES CATALOG (Question 6)

Availability Indicated		Social St.		Science		Total	
		f	%	f	%	f	%
Yes	Public	74	40	130	61	204	51
	Private	16	64	23	74	39	70
	Total	90	42	153	62	243	53
No	Public	99	53	66	31	165	41
	Private	7	28	7	23	14	25
	Total	106	50	73	30	179	39
Not Sure	Public	6	3	8	4	14	4
	Private	2	8	1	3	3	5
	Total	8	4	9	4	17	4
No Response	Public	8	4	9	4	17	4
	Private	--	--	--	--	--	--
	Total	8	4	9	4	17	4
Totals	Public	187	100	213	100	400	100
	Private	25	100	31	100	56	100
	Total	212	100	244	100	456	100

Well annotated. (I-3/01, 450007)

Not seen. (J-3/01, 460005)

Fantastic educational materials! I order films, literature and make use of conservation speakers. Last year our librarian arranged for the Energy Van to visit our school. (J-3/01, 460006)

Please forward one. (J-3/02, 560055)

Assume it is in media center. (J-3/03, 560166)

Administrative Encouragement. When asked about administrative encouragement of the use of sponsored (free) materials, slightly in excess of half of the teachers responded that they believed their administration (principal) did encourage such use. The differences between private (70 per cent) and public school respondents (55 per cent) was markedly different.

These data are presented in Table 7SH.

TABLE 7SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING ADMINISTRATIVE ENCOURAGEMENT OF USE OF SPONSORED MATERIALS (Question 7)

Administrative Encouragement		Social St. f	Social St. %	Science f	Science %	Total f	Total %
Yes	Public	105	56	113	53	218	55
	Private	20	80	19	61	39	70
	Total	125	59	132	54	257	56
No	Public	42	22	51	24	93	23
	Private	2	8	7	23	9	16
	Total	44	21	58	24	102	22
Not Sure	Public	31	17	37	17	68	17
	Private	3	12	5	16	8	14
	Total	34	16	42	17	76	17
No Response	Public	9	5	12	6	21	5
	Private	--	--	--	--	--	--
	Total	9	4	12	5	21	5
Totals	Public	187	100	213	100	400	100
	Private	25	100	31	100	56	100
	Total	212	100	244	100	456	100

The remarks which the teachers made revealed a number of interesting distribution techniques (or lack of same). Typical were the following:

> My principal distributed your catalogues to teachers who would most likely use them and encouraged us to make use of them. (J-4/01, 460018)
>
> One of your catalogues has been placed in our teacher's lounge. (J-4/01, 460022)
>
> No administration guidance in this area. (J-4/01, 560010)
>
> Flyers in mailbox. (J-4/02, 560035)
>
> Have seen no emphasis on this. (J-4/02, 560210)
>
> Through resource center. (I-4/01, 550010)
>
> They should make available these materials! (I-4/01, 550063)

> We are encouraged but we usually find out about them on our own. (I-4/02, 550074)

> Through dept. meetings. (I-4,02, 550104)

Again, CPC's ESP may wish to look at the way in which their catalogs are distributed to the high schools. They might find that by sending copies to the department chairs of the social studies and science departments, with an information copy to the principal, that the availability of materials might be appreciably increased. Care must be taken not to insult the administration, however increased exposure of catalogs (materials availability listings) should be considered.

Teacher Use of Materials. The next question dealt with the use teachers made of sponsored (free) materials. The choices presented were the same as those presented by Netzer over 30 years ago. Examination of the data, presented in Table 8SH, reveals that Netzer had an appreciably stronger response pattern than did this study. Four (4) of Netzer's options had in excess of 50 per cent response, while only two (2) of the present study's responses received this ratio. There may be several possible answers to this dilemma (Netzer conducted individual interviews with 30 teachers in each category while this study was a mailed opinionaire; Netzer had a relatively small sample size - for a discussion of this see The Use of Industry Aids in Schools, pp. 10-13.). For the purposes of this study comparisons will be made between the two sets of data and should be interpreted by the reader recognizing the possible dissimilarities between the data bases.

TABLE 8SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING USE PRESENTLY MADE OF SPONSORED MATERIALS (Question 8)

Use Made		Social St. f	%	N* %	Science f	%	N* %	Total f	%	N* %
Stimulate	Pb	108	58		126	59		234	59	
Interest	Pr	14	56		18	58		32	57	
(Opt. A)	T	122	58	63	144	59	83	266	58	72
Supplementary	Pb	123	66		153	72		276	69	
to Unit	Pr	17	68		23	74		40	71	
(Opt. B)	T	140	66	70	176	72	86	316	69	78
Basic Material	Pb	26	14		26	12		52	13	
in Unit	Pr	2	8		6	19		8	14	
(Opt. C)	T	28	13	17	32	13	37	60	13	27
Reference Mtl.	Pb	37	20		44	21		81	20	
in Unit	Pr	5	20		8	26		13	23	
(Opt. D)	T	42	20	30	52	21	33	94	21	32
Special Report	Pb	27	14		35	16		62	16	
Materials	Pr	8	32		8	26		16	29	
(Opt. E)	T	35	17	43	43	18	67	78	17	55
Reference Mtl.	Pb	57	30		54	25		111	28	
Class Discuss	Pr	6	24		11	35		17	30	
(Opt. F)	T	63	30	33	65	26	40	128	28	37
Bulletin Board	Pb	60	32		70	33		130	33	
Display	Pr	8	32		12	39		20	36	
(Opt. G)	T	68	32	63	82	34	83	150	33	73
Enrich Rdg.	Pb	18	10		24	11		42	11	
Brighter St.	Pr	3	12		6	19		9	29	
(Opt. H)	T	21	10	33	30	12	57	51	11	45
Basic Rdg.	Pb	7	4		5	2		12	3	
All Stdts.	Pr	1	4		3	10		4	7	
(Opt. I)**	T	8	4	--	8	3	--	16	6	--
Suppl. Rdg.	Pb	11	6		15	7		26	7	
Slow Stdts.	Pr	2	8		3	10		5	9	
(Opt. J)***	T	13	6	3	18	7	--	31	7	2
Workbook	Pb	8	4		11	5		19	5	
(Opt. K)	Pr	2	8		3	10		5	9	
	T	10	5	3	14	6	--	24	5	2

(continued next page)

TABLE 8SH (continued)

Use Made		Social St. f	Social St. %	N* %	Science f	Science %	N* %	Total f	Total %	N* %
Planned Part of Unit (Opt. L)	Pb	48	26		48	23		96	24	
	Pr	7	28		8	26		15	27	
	T	55	26	17	56	23	47	111	24	32
Material Add Casually (Opt. M)	Pb	49	26		55	26		104	26	
	Pr	10	40		8	26		18	32	
	T	59	28	50	63	26	37	122	27	43
Demonstration Material (Opt. N)	Pb	17	9		40	19		57	14	
	Pr	6	24		6	19		12	21	
	T	23	11	37	46	19	53	69	15	45
Ref. Mtls. Voc. Inter. (Opt. O)	Pb	16	9		36	17		52	13	
	Pr	4	16		5	16		9	21	
	T	20	9	37	41	17	27	61	13	32
Scrapbook & Posters (Opt. P)	Pb	5	3		7	3		12	3	
	Pr	1	6		2	6		3	5	
	T	6	3	23	9	4	27	15	3	25
Others (Opt. Q)	Pb	--	--		6	3		6	2	
	Pr	--	--		--	--		--	--	
	T	--	--	--	6	2	--	6	1	--

Note: Multiple responses were received in many cases.
Totals exceed 100 per cent.
* From Netzer, *The Use of Industry Aids in Schools*, Table 14, p. 54 (derived data).
** Option not included in Netzer Study.
*** Form of option changed slightly.

One general observation can be made, however, and that is that science teachers appear to make more use of these materials than do social studies teachers. This same generalization can be drawn from Netzer's data. One noticeable decline was that of using sponsored materials for bulletin board displays. The same can be said about using materials for writing special reports. It can be hypothesized that teaching methodology may have changed over the intervening third of a century, however, based upon the present study it can be assumed that the philosophy adopted by CPC's ESP upon its inception = that of making their materials supplementary to the curriculums of the schools = is still a viable approach to the matter. The strongest response received was that of the materials being "supplementary to a unit" [of study] is still true. Couple this with using the materials to stimulate interest and CPC's philosophical approach becomes even more tenable.

Materials Desired. When queried about the types of materials they desired, the senior high school teachers responded in a pattern similar to that of Netzer's teachers of 30 years ago. The rank ordering was slightly different with today's teachers ranking films ahead of wall charts, but the overall pattern was similar. The list presented the teachers today did have three variations and over one=third of them did express a desire to have resource persons made available to their programs. This may well be an area that ESP may wish to investigate in the future. Surprisingly, social studies teachers indicated this with a slight bit more frequency than did the science teachers (37 per cent to 34 per cent). Despite some slight changes, the top four preferences, all indicated on more than half of the responses, were: motion pictures (75 per cent); wall charts (65 per cent), not provided by ESP at the present time; filmstrips (54 per cent); and wall maps (52 per cent) again, not provided by ESP at this time. These two types of materials are ones that should receive some serious consideration for future development within the secondary curruculum offerings of the next five years. These data are presented in Table 9SH.

TABLE 98H RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING TYPES OF MATERIALS DESIRED BY TEACHERS (Question 9)

Types Materials Desired		Social St. f	Social St. %	N* %	Science f	Science %	N* %	Total f	Total %	N* %
Pamphlets w/	Pb	61	33		52	24		113	28	
prose desc.	Pr	8	32		10	32		18	32	
(Opt. A)	T	69	33	47	62	25	60	131	29	53
Pamphlets	Pb	26	14		15	7		41	10	
Comic Bk Type	Pr	6	24		7	23		13	23	
(Opt. B)	T	32	15	10	22	9	20	54	12	15
Series/Pamph.	Pb	58	31		44	21		102	26	
w/one theme	Pr	8	32		8	26		16	29	
(Opt. C)	T	66	31	50	52	21	43	118	26	47
Worksheets	Pb	77	41		65	31		142	36	
for Seatwork	Pr	12	48		20	65		32	57	
(Opt. D)	T	89	42	10	85	35	--	174	38	5
Wall charts	Pb	125	67		129	61		254	64	
(Opt. E)	Pr	18	72		25	81		43	77	
	T	143	67	77	154	63	87	297	65	82
Wall Maps	Pb	116	62		85	40		201	50	
(Opt. F)	Pr	14	56		22	71		36	64	
	T	130	61	60	107	44	47	237	52	53
Filmstrips	Pb	94	50		109	51		203	51	
(Opt. G)	Pr	18	72		23	74		41	73	
	T	112	53	60	132	54	70	244	54	65
Motion Pict.	Pb	142	76		172	81		314	79	
(16 mm)	Pr	19	76		28	90		47	84	
(Opt. H)	T	161	76	87	200	82	63	361	79	75
Media Kits	Pb	87	47		96	45		183	46	
(film/s &cas)	Pr	9	36		20	65		29	52	
(Opt. I)**	T	96	46	--	116	48	--	212	46	--
Video	Pb	65	35		67	31		132	33	
Cassettes	Pr	5	20		6	19		11	20	
(Opt. J)**	T	70	33	--	73	30	--	143	31	--
Display	Pb	28	15		51	24		79	20	
Kits	Pr	8	32		13	42		21	38	
(Opt. K)	T	36	17	17	64	26	70	100	22	43

(continued next page)

TABLE 9SH (continued)

Types Materials Desired		Social St. f	Social St. %	N* %	Science f	Science %	N* %	Total f	Total %	N* %
Demonstration	Pb	27	14		79	37		106	27	
Kits	Pr	10	40		17	55		17	30	
(Opt. L)	T	37	17	10	96	39	57	123	27	33
Graphic	Pb	36	19		34	16		70	18	
Presentations	Pr	6	24		6	19		12	21	
(Opt. M)	T	42	20	27	40	16	37	82	18	32
Field Trips	Pb	24	13		42	20		66	17	
(Opt. N)**	Pr	6	24		9	29		15	27	
	T	30	14	--	51	21	--	81	18	--
Resource	Pb	66	35		66	31		132	33	
Persons	Pr	13	52		16	52		29	52	
(Opt. O)**	T	79	37	--	82	34	--	161	35	--
Role Playing	Pb	27	14		17	8		44	11	
Activities	Pr	4	16		1	3		5	9	
(Opt. P)**	T	31	15	--	18	7	--	49	11	--
Others	Pb	1	1		5	2		6	2	
(Opt. Q)	Pr	1	4		--	--		1	2	
	T	2	1	--	5	2	--	7	2	--

Note: Multiple responses were received in many cases.
Totals exceed 100 per cent.
* From Netzer, *The Use of Industry Aids in Schools*, Table 18, p. 80 (derived data).
** Option not included in Netzer Study.

Some typical comments received were:

I have found wall charts and maps to be extremely helpful. Your "Electricity and Me" kit is excellent. (J-6/01, 460006)

Overhead transparency, microcomputer programs. (J-6/01, 560056)

Really liked your energy van. (J-6/01, 560103)

Computer Disk programs for Apple II. (J-6/01, 560151)

Corporation organization charts - business flow charts. (I-6/01, 550008)

No $ for field trips. (J-6/01, 550148)

Features Desired. The respondents were asked what features they looked for in sponsored educational materials. Their overwhelming response (74 per cent) was an "objective presentation of all important facts." These data are presented in Table 10SH. Of particular interest is the decided increase in per cent of responses from teachers indicating this desire for objectivity (an increase of 12 per cent). In many of the other categories the relative rating, while lower for the present study, tends to maintain the relative importance. Again, this is why an increase in per cent of responses in the present study, over Netzer's study,is to be particularly noted. It should also be noted that teachers' perceptions of "objectivity" in all probability lies in the observer, whose views may vary. The following comments are believed to be noteworthy:

> I do not like obvious advertising. It is expected that a particular viewpoint will be observed, but this should be done in a restrained manner. (I-7/01, 550046)
>
> "Objective presentation of all important facts."--Not always true of Consumers. (J-7/01, 460020)
>
> Many time facts conflict with each other in today's world. I would like some good dilemma problems to use after showing a good film. These would be used to help students develop their own models. (J-7/01, 560177)
>
> I must assume a bias toward industry when using CP materials. If approved by NABT [National Association of Biology Teachers] or NSTA [National Science Teachers Association) as unbiased, then would believe them and use material more. (J-7/01, (560050)

Materials Preference Ranking. Teachers were also asked to rank their preferences for materials, based upon the ESP "Catalog" classification schema, that is, those materials already provided by ESP to them. It is to be regretted that "computer software" was not included in the ranking schema (an

TABLE 10SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING FEATURES DESIRED IN SPONSORED MATERIALS (Question 10)

Features		Social St.		N*	Science		N*	Total		N*
Desired		f	%	%	f	%	%	f	%	%
Objective	Pb	141	75		153	72		294	74	
Presentation	Pr	16	64		28	90		44	79	
(Opt. A)	T	157	74	63	181	74	60	338	74	62
Make-up Sim.	Pb	20	11		31	15		51	13	
Textbooks	Pr	3	12		10	32		13	23	
(Opt. B)	T	23	11	7	41	17	10	64	14	8
Attention to	Pb	46	25		73	34		119	30	
Grade Levels	Pr	13	42		12	39		25	45	
(Opt. C)	T	59	28	33	85	35	47	144	32	40
Attention to	Pb	52	28		51	24		103	26	
Reading Lvls.	Pr	6	24		5	16		11	20	
(Opt. D)	T	58	27	37	56	23	40	114	25	38
Ref. to Other	Pb	35	19		35	16		70	18	
Pub. Mtls.	Pr	2	8		10	32		12	21	
(Opt. E)	T	37	17	43	45	18	33	82	18	38
Discussion	Pb	67	36		53	25		120	30	
Topics Prov.	Pr	8	32		14	45		22	39	
(Opt. F)	T	75	35	33	67	27	20	212	46	27
Questions on	Pb	63	34		56	26		119	30	
Content/Mtls.	Pr	9	36		12	39		21	38	
(Opt. G)	T	72	34	17	68	28	43	140	31	30
Quests Accomp.	Pb	65	35		54	25		119	30	
Materials	Pr	10	40		12	39		22	39	
(Opt. H)	T	75	35	13	66	27	43	141	31	28
Suggested	Pb	55	29		74	35		129	32	
Activities	Pr	10	40		22	71		32	57	
(Opt. I)	T	65	31	33	96	39	43	161	35	38
Prov. Ind.	Pb	22	12		21	10		43	11	
Differences	Pr	4	16		7	23		11	20	
(Opt. J)	T	26	12	23	28	11	27	54	12	25
Graphic/Pict.	Pb	44	24		37	17		81	20	
Materials	Pr	6	24		9	29		15	27	
(Opt. K)	T	50	24	33	46	19	40	96	21	37

(continued next page)

TABLE 10SH (continued)

Features Desired		Social St. f	Social St. %	N* %	Science f	Science %	N* %	Total f	Total %	N* %
Scrapbook	Pb	5	3		10	5		15	4	
Technique	Pr	3	12		4	13		7	13	
(Opt. L)	T	8	3	3	14	6	7	22	5	5
Use Color for	Pb	53	28		72	34		125	31	
Aesthetic App	Pr	11	44		14	45		25	45	
(Opt. M)	T	64	30	40	86	35	50	150	33	45
Copies in	Pb	83	44		90	42		173	42	
Quantity	Pr	14	56		20	65		34	61	
(Opt. N)	T	97	46	40	110	45	73	207	45	57
Spirit Master	Pb	115	54		130	61		245	61	
Stencils	Pr	17	68		21	68		38	68	
(Opt. O)**	T	132	62	--	151	62	--	283	62	--
Prov./Make	Pb	55	29		82	38		137	34	
Transparency	Pr	12	48		19	61		31	55	
(Opt. P)**	T	67	32	--	101	41	--	168	37	--
Others	Pb	3	2		5	2		8	2	
(opt. Q)	Pr	--	--		--	--		--	--	
	T	3	1	--	5	2	--	8	2	--

Note: Multiple responses were received in many cases. Totals exceed 100 per cent.
* From Netzer, The Use of Industry Aids in Schools, Table 19, p. 84.
** Option not included in Netzer Study.

oversight for which the researcher offers deepest apologies and sincere regrets). The rankings presented in Table 11SH were all derived from the choices indicated by the respondents and then changed by the use of a "weighted" scale.

As can be observed from the data, films was by far the first choice of the respondents, followed by media kits and filmstrips (which two choices were virtually tied). The other three choices were certainly not so heavily favored. Surprisingly, literature finished even behind video tapes for this particular group of teachers. There were no comments received concerning any of these choices.

TABLE 11SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING TYPES OF MATERIALS PREFERRED - RANK ORDER INFERRED (Question 11)

Type of Material		Social St.		Science		Total	
		r*	wt.	r*	wt	r*	wt
Teacher Ref Materials	Pb	4	537	4	562	4	1099
	Pr	4	68	4	112	4	180
	T	3	605	4	674	4	1279
Video Tapes	Pb	3	543	5	551	5	1094
	Pr	6	45	6	52	6	97
	T	5	588	6	603	5	1191
Media Kits	Pb	2	567	3	585	2	1152
	Pr	3	76	2	122	2	198
	T	2	643	3	707	2	1350
Films	Pb	1	809	1	930	1	1739
	Pr	1	102	1	145	1	247
	T	1	911	1	1075	1	1986
Filmstrips	Pb	5	524	2	621	3	1145
	Pr	2	78	3	118	3	196
	T	4	602	2	739	3	1341
Literature	Pb	6	450	6	513	6	963
	Pr	5	60	5	102	5	162
	T	6	510	5	615	6	1125

*Rank order - derived from "weighted scale."
Note: Inferences drawn from frequency of choice for each rank.

ANALYSES OF PARTICULAR INTEREST TO ESP PERSONNEL

The next five sections of analysis, together with the accompanying tables, represent the "heart" of this particular study, as the subject matter involved may well serve as the basis for CPC's ESP's educational program for the next five or more years. The high school social studies and science teachers were queried concerning their opinions regarding certain "controversial" topics related to CPC's interests in the field as a provided of energy, as well as a provider of educational materials related to the power industry in general, and the service area of CPC in particular.

In all cases the teachers were asked if they would "consider using" selected educational materials in a selected subject area with their classes, if CPC were to prepare and districbute such materials. These areas were carefully chosen and the instruments mailed at a time when a "least favorable" climate might have been expected. The teachers were contacted less than one month prior to the general election where a bitterly contested election was about to take place. Member companies of the utilities industry, as well as many other vested interest groups, were engaged in contesting three separate referenda which were on the ballot.

Energy Conservation. The respondents indicated a strong acceptance of the idea of considering materials dealing with energy conservation, if these were to be provided by CPC's ESP. Approximately three-quarters of the respondents responded in a positive manner (73 per cent), with science teachers indicating a stronger preference (77 per cent) than did social studies teachers (68 per cent). Complete data are presented in Table 12SH.

TABLE 12SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH ENERGY CONSERVATION (Question 12)

Opinion - Materials Energy Conservation		Social St.		Science		Total	
		f	%	f	%	f	%
Yes - Would Consider	Public	127	68	161	76	288	72
	Private	18	72	26	84	44	79
	Total	145	68	187	77	332	73
No- Would Not Consider	Public	22	12	11	5	33	8
	Private	3	12	1	3	4	7
	Total	25	12	12	5	37	8
Not Sure	Public	31	16	29	14	60	15
	Private	4	16	4	13	8	14
	Total	35	17	33	13	68	15
No Response	Public	7	4	12	5	19	5
	Private	--	--	--	--	--	--
	Total	7	3	12	5	19	4
Totals	Public	187	100	213	100	400	100
	Private	25	100	31	100	56	100
	All	212	100	244	100	456	100

Many interesting comments were received, some of which are reproduced below.

> Objectivty; practical application for students. (I-8/01, 550011)
> Practical hints for student use. (I-8/02, 550069)
> Basic consumer education/awareness, application. Sound practices in the "limited dollar" area. (I-8/03, 550168)
>
> In current events, because that is an ongoing problem, trace it from '72 to current date with 10-20 year projections. (I-8/03, 550146).
>
> I would consider using these in my sociology classes if they stressed the sociological implications of energy conservation. I could also see them used in an economics or geography class (possibly government). (I-8/03, 550113)

> I would fear this material could lack objectivity but I would probably use it. (I-9/05, 550181)
>
> I would like to be able to have an electric meter in a classroom demonstration model. If possible, we could hook up appliances directly to the meter and see what appliances are the "energy consumers." (J-8/01, 460006)
>
> "Hands on" materials to evaluate energy usage in normal situation of individuals with an emphasis on creating student awareness of his/her role now and in the future. (J-8/02, 560031)
>
> The energy story as it applies to Michigan. (J-8/03, 560077)

As was to be expected, not all of the comments were positive, some offering very pointed observations:

> I doubt that they [CPC] could objectively deal with this subject (J-8/04, 560102)
>
> But please an objective approach with both sides of an issue presented in equal balance--not a hidden sales pitch or sly pro-Consumers propaganda blast. (J-8/05, 560152)
>
> Consumers Power Company's point of view--a biased approach. (I-8/01, 550012)
>
> Finally - one comment that had to be included!!!
>
> Not just Consumer Power Company activities in regard to energy conservation, but also include your remarkable conservation record. (I-8/02, 550065)

As can be seen from the above comments, and these are only illustrative, the opinions are varied and wide ranging, yet overall the respondents expressed their need for objective educational materials, and their willingness to preview them.

Michigan Economic Development Program. The teachers were asked about their opinions concerning the development and distribution of materials specifically dealing with Michigan's Economic Development Program. This suggestion received "mixed reactions" from the respondents. As could be expected from the nature of the proposed materials the social studies teachers favored it (67 per cent) while the science teachers did not support it (32 per cent). Overall, the support for these proposed materials was not "overwhelming" (48 per cent). Data are presented in Table 13SH.

TABLE 13SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH THE MICHIGAN ECONOMIC DEVELOPMENT PROGRAM (Question 13)

Opinion - Materials Michigan Econ. Dev.		Social St.		Science		Total	
		f	%	f	%	f	%
Yes - Would Consider	Public	123	66	52	24	175	44
	Private	18	72	26	84	44	79
	Total	141	67	78	32	219	48
No- Would Not Consider	Public	10	5	78	37	88	22
	Private	3	12	1	3	4	7
	Total	13	6	79	32	92	20
Not Sure	Public	48	26	67	31	115	29
	Private	4	16	4	13	8	14
	Total	52	24	71		123	27
No Response	Public	6	3	16	8	22	5
	Private	--	--	--	--	--	--
	Total	6	3	16	7	22	5
Totals	Public	187	100	213	100	400	100
	Private	25	100	31	100	56	100
	All	212	100	244	100	456	100

A few comments should be sufficient for illustrative purposes;

> I'm not sure what the program would encompass, but from the title it would seem to have application for Michigan high school students. (I-9/01, 550018)
>
> I don't know what the development program is, but I would like to know more about it. (I-9/02, 550087)
>
> If not propaganda for CP. (I-9/02, 550167)
>
> Reasons for loss of big business. (I-9/02, 550171)
>
> I don't feel it would be directly related to science. (J-9/01, 460004)

> Concern that it would be politically motivated and biased. (J-9/01, 560012)
> Of little value to science classes. More appropriate social studies. (J-9/01, 560023)
>
> Material which would help explain what in heavens name economics is all about!!! (J-9/02, 560052)
>
> Don't know what it is. (J-9/02, 560103)

Rate Structure of Regulated Industries. The matter of the rate structure of regulated industries was the one item on the opinionaire which engendered the least favorable support and the largest number of unfavorable comments (See Appendixes I-10, pp. 1 -4 and J-10, pp. 1 - 4). Only one-fourth (23 per cent) of the science teachers evidenced any interest in the topic while 45 per cent of them indicated that they would not consider using these materials. The social studies teachers, however, did display some interest in the topic, with 51 per cent of them indicating they would consider using it if it were produced. As was to be expected the comments were "pithy" to say the least. Several are cited to give their flavor, and these should be read in full for a more detailed impression. Data are presented in Table 14SH.

> I strongly question if Cons. Power Co. could be objective on this topic. (I-10/01, 550004)
>
> I'll decide after the election--let's see how _____ Proposal "D" is. (I-10/01, 550024)
>
> Boring to students. (I-10/01, 550035)
>
> How regulations affect both the consumer and producer. Why regulations exist. Cost factors weighed against benefits. (I-10/02, 550081)
>
> After your attack on Proposal D it is doubtful that you could produce an unbiased presentation on utilities. (I-10/03, 550147)

TABLE 14SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH THE RATE STRUCTURES OF REGULATED INDUSTRIES (Question 14)

Opinion - Materials Rates/Regulated Ind.		Social St. f	Social St. %	Science f	Science %	Total f	Total %
Yes - Would Consider	Public	98	52	51	24	149	37
	Private	10	40	6	19	16	29
	Total	108	51	57	23	165	36
No- Would Not Consider	Public	33	18	89	42	122	31
	Private	8	32	20	65	28	50
	Total	41	19	109	45	150	33
Not Sure	Public	49	26	57	27	106	26
	Private	6	24	4	13	10	18
	Total	55	26	61	25	116	25
No Response	Public	7	4	16	7	23	6
	Private	1	4	1	3	2	3
	Total	8	4	17	7	25	6
Totals	Public	187	100	213	100	400	100
	Private	25	100	31	100	56	100
	All	212	100	244	100	456	100

Too much like propaganda. (J-10/01, 460018)

I think I would have difficulty working it into my science teaching--although I should attempt to do it(?). (J-10/01, 560013)

Would consumer groups have a valid say in what went into the publication? (J-10/02, 560050)
Only if they were truly objective. (J-10/02, 560133)

Would need to evaluate first, "Consumers" is an "interest group"! Don't believe it is the responsibility of school to promote interest groups--only teach about them objectively. (J10/02, 560142)

Could be very informative, to show complexity of rate structuring--or a snow job--could easily appear this way or be used to present company point of view (justification). (J-10/02, 560109)

Nuclear Fission to Produce Electric Energy. The teachers responded to this query in a most positive manner. In excess of three-quarters of the science teachers indicated their receptivity to materials dealing with this controversial issue. Only one-half of the social studies teachers responded in a similar fashion. The remarks tended to encourage CPC's EDP to provide factual information of an "unbiased" nature. The data are presented in Table 15SH.

TABLE 15SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH THE USE OF NUCLEAR FISSION TO PRODUCE ELECTRIC ENERGY (Question 15)

Opinion - Materials Nuclear/Prod. Energy		Social St.		Science		Total	
		f	%	f	%	f	%
Yes - Would Consider	Public	95	51	166	78	261	65
	Private	12	48	25	80	37	66
	Total	107	51	191	78	298	65
No- Would Not Consider	Public	46	25	17	8	63	16
	Private	7	28	3	10	10	18
	Total	53	25	20	8	73	16
Not Sure	Public	40	21	17	8	57	14
	Private	5	20	3	10	8	14
	Total	45	21	20	8	65	14
No Response	Public	6	3	13	6	19	5
	Private	1	4	--	--	1	2
	Total	7	3	13	6	20	5
Totals	Public	187	100	213	100	400	100
	Private	25	100	31	100	56	100
	All	212	100	244	100	456	100

The comments were most revealing:

Explain fission, processes involved, reactor, where U235 comes from and how it gets here, possible accidents and safety precautions. (j-11/01, 460005)

Your presentation would most likely be biased in favor of your nuclear power plants. I would prefer my students investigate more objective sources of information, so they can make up their own minds. (J-11/01, 460018)

Yes, if materials presented an objective view. (j-11/02, 560025)

We need to educate the people on the positive aspects of nuclear energy and its capabilities. There is too much negative publicity!!! (J-11/02, 560071)

This would be helpful in our study of nuclear physics. (J-11/03, 560082)

If the presentation is without bias and disposal of nuclear wastes presented as environmental problem. (J-11/05, 560167)

I only teach history, not science. (I-11/01, 550029)

BUT ONLY if problems of waste disposal and possible dangers of accident are also objectively discussed. (I-11/02, 550046)

For political science class unit on political action--debate film stressing safety precautions & disposal / examine health hazards for nonprotection. (J-11/02, 550051)

I would use these if they discussed socio-economic implications. (I-11/02, 550113)

Probably not an area that most social studies teachers at ___ would cover. (J-11/03, 550162)

Personally, I have my doubts on the development of nuclear power. 3 Mile Island--the aftermath, evaluation of damage, has certainly been thought provoking. (J-11/03, 550169)

Two thoughts appeared to run throughout the comments: (1) that the presentation should be objective and even handed, and (2) that the social studies teachers viewed this as a science problem and not a problem of our society, indeed they saw little relationship between their teaching and this "burning issue" of today.

Acid Rain. Finally, the teachers were asked about using materials dealing with the problem of "acid rain." They appeared to be highly positive about this issue. The science teachers again led the way with 85 per cent of them favoring examining materials related to the issue. The social studies teachers favored examining the materials by approximately two to one (63 per cent). The overall response rate was exactly three-fourths of the respondents (75 per cent). A few selected comments should serve to illustrate the teachers' points of view. Complete data are presented in Table 16SH.

TABLE 16SH RESPONSES OF SENIOR HIGH SCHOOL TEACHERS REGARDING POSSIBLE USE OF FREE EDUCATIONAL MATERIALS DEALING WITH THE ECOLOGICAL FACTORS INVOLVED IN THE "ACID RAIN" PROBLEM (Question 16)

Opinion - Materials "Acid Rain" Problem		Social St.		Science		Total	
		f	%	f	%	f	%
Yes - Would Consider	Public	120	64	179	84	299	75
	Private	14	56	28	90	42	75
	Total	134	63	207	85	341	75
No- Would Not Consider	Public	26	14	7	3	33	8
	Private	4	16	--	--	4	7
	Total	30	14	7	3	37	8
Not Sure	Public	35	19	14	7	49	12
	Private	5	20	3	10	8	14
	Total	40	19	17	7	57	12
No Response	Public	6	3	13	6	19	5
	Private	2	8	--	--	2	4
	Total	8	4	13	5	21	5
Totals	Public	187	100	213	100	400	100
	Private	25	100	31	100	56	100
	All	212	100	244	100	456	100

Relate unit to economics. (J-12/01, 550010)

The problem and what's being done about it: effects of acid rain on business, environment, chemicals, food chain, etc. (J-12/01, 550017)

As society's problem. (J-12/01, 550047)

For political action debate; present both sides of issues: film or filmstrip, worksheet and discussion guide. (J-12/01, 550051)

This, I believe, is more appropriate to science class. (J-12/02, 550074)

I take one environmental topic each month as part of my chemistry courses. The topics include air pollution, water pollution, nuclear and solar energy. Other forms of energy, solid wastes, chemical toxic wastes, food additives and soil chemistry. I could use materials and films on all these topics. (J-12/01, 460023)

Both sides, the ecological plus the company. (J-12/01, 560002)

Objectivity? (J-12/02, 560014)

The causes of acid rain and how we can avoid these problems with nuclear and other forms of energy. (560071)

This does fit into my program and is an important topic for discussion and study. (J-12/03, 560140)

Summary. Finally, in looking at all of the responses to this section of the opinionaire, it appears that overall the responses were quite positive. In studying the comments made by the senior high school social studies and science teachers it is apparent that they are asking for an unbiased presentation of the facts. They are asking that the schools not be used to promote any one industry or any one point of view. They ask only that the materials that are offered to the schools be as unbiased as possible and that they offer all sides of any controversial issue. The one word which appears most often, or at least with most impact, was "unbiased" or "objective." The one label which should be avoided at all costs, in the preparation of educational materials, is "propaganda." Examination and analysis of these data tend to show that CPC's ESP program has a positive acceptance rate with these teachers.

CHAPTER III

SUMMARY, FINDINGS AND CONCLUSIONS

This final chapter is presented in three sections: the first section presents a summary of the problem and the procedures used. The second section recapitulates the findings of the research itself. The third and final section presents certain conclusions which were drawn from the findings and offers recommendations for further study.

SUMMARY

The Problem. It was the purpose of this study to investigate the opinions of senior high school social studies and science teachers concerning use of sponsored (free) materials in their classes. They were queried concerning the types of materials they had used and would like to see developed. Their responses were then compared with those received by Netzer in her classic study conducted over 30 years ago. In addition the teachers were asked their opinions concerning selected pieces of free (sponsored) materials that might be provided them by Consumers Power Company at some time in the future.

This study specifically attempted to determine, and compare where applicable: (1) the teaching position of the respondent; (2) membership(s) in professional organization(s); (3) years of both teaching and administrative experience; (4) use of sponsored (free) materials with classes; (5) use of sponsored (free) materials provided by CPC; (6) awareness of CPC's resource catalog; (7) administrative encouragement for use of sponsored materials; (8) use(s) presently being made of sponsored materials (adapted from Netzer); (9) determination of types of materials considered to be most useful (adapted from Netzer); (10) features the respondent would like to see in future sponsored materials (adapted from Netzer); (11) determination of a relative rank ordering of the different types of materials respondents would like to see CPC provide, based upon those materials already being provided (ESP Catalog classification schema used as a basis); (12) a determination of the respondents opinions regarding five broad subject areas of potential materials development activity for CPC's ESP program within the next five years. Finally, respondents were asked for their suggestions for improvement of CPC sponsored materials in any areas not previously covered in the instrument.

Design of the Study. A normative survey was conducted, using an instrument specifically developed for this study. Instruments were mailed to the principals of all high schools within the CPC distribution area. These mailings included two additional opinionaires addressed to the social studies and science teachers. The principal was asked to distribute these instruments to his teachers. A follow-up postal card was mailed approximately four to six weeks later to those teachers and principals who had failed to respond to the initial request for information.

This study is one of six similar studies being conducted for CPC which will present and compare the opinions of the following groups of educators: (1) Lower Elementary (K-3) Teachers; (2) Upper Elementary (4-6) Teachers); (3) Elementary Principals; (4)

Junior High School Social Studies and Science Teachers; (5) Senior High School Social Studies and Science Teachers; and (6) Junior High and Senior High School Principals.

FINDINGS

The following findings, indicated by an analysis of the data, are reported:

1. Thirty-seven per cent of the opinionaires were returned in usable form. This is an acceptable rate of response, therefore generalizations were drawn to the population of secondary social studies and science teachers within the CPC distribution area of Michigan.
2. A vast majority of these teachers belong to both the National Education Association (81 per cent) and the Michigan Education Association (84 per cent). They also are quite experienced with three-quarters of them having more than ten years classroom teaching experience.
3. They, as a group, do tend to use sponsored (free) teaching materials. In excess of 85 per cent of them report using some type of sponsored aid; 63 per cent report using some type of CPC furnished materials. In excess of half of them (53 per cent) report having seen the latest catalog, while 56 per cent of them report receiving some sort of administrative encouragement to use sponsored (free) materials.
4. The most popular uses of sponsored (free) materials is

as supplementary to a unit and to stimulate interest.

5. The most desired types of materials are films, filmstrips, wall charts and wall maps. The most desired feature in these materials should be an objective presentation.

6. The teachers indicated the following ranking of subject matter in materials they would examine for possible use with their classes: (1) Ecological Factors Involved in the "Acid Rain" Problem (75 per cent); (2) Energy Conservation (73 per cent); (3) Use of Nuclear Fission to Produce Electric Energy (65 per cent); (4) Michigan's Economic Development Program (48 per cent); and (5) Rate Structures of Regulated Industries (36 per cent).

7. The remarks made in response to the specific question (Appendixes I and J) when considered overall, were highly positive in support of free educational materials in general, and the efforts of CPC's ESP in particular.

CONCLUSIONS

Based upon the data collected, the analyses made, and the findings reported, the following conclusions were drawn:

1. The respondents, all of whom are social studies or science teachers in Michigan high schools, are favorably inclined toward the use of sponsored (free) educational materials.

2. The method of distributing CPC's ESP Guide to Teaching

Resources to the high schools should be examined, and consideration given to mailing it to department heads within the schools as well as the building principal.

3. The teachers have a relatively positive impression of the materials which may be produced by ESP within the next several years.

4. The respondents welcome the educational materials provided their schools as long as it is **unbiased and relatively free of advertising**.

5. Examination of the comments made by the social studies and science teachers reinforces the positive nature of the above stated conclusions (with the few noted exceptions). The reader is advised to study these comments in detail and draw his own conclusions.

   Note: These comments were not provided those persons who received copies of this study at the Electric Utility Educators Conference, May 25-26, 1983, Kansas City, Missouri.

RECOMMENDATIONS

No recommendations for further study will be made at this time. As noted at the beginning of this study, this is merely the first in a series of six similar studies. Within the next several months additional studies will be completed dealing with the opinions of principals, lower elementary and upper elementary teachers, as well as junior high school teachers of social studies and science. Upon the completion of these studies specificoverall recommendations will be made.

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CHARLES R. DU VALL, PH.D.
(219) 291-6498

October 15, 1982

Dear Teacher or Principal:

Consumers Power Company is interested in finding out exactly what type of FREE MATERIALS practicing educators such as yourself would like to see developed over the next five (5) years. Would you please complete this opinionaire and return it in the self-addressed, stamped envelope provided?

This study is intended to give the officials of Consumers Power Company an idea of the educational materials practicing educators need. Consumers Power Company has retained us, an independent research organization, to conduct this study and evaluate the responses from instructional leaders such as yourself. Please feel free to give us a frank evaluation of the materials you have seen in the past--and what you would like to see in the future.

Your response is valued. The results of this study will be used--and you will see these results in the form of educational materials that more fully meet your educational needs (as expressed in your responses to this opinionaire). HELP US TO HELP YOU!!! Complete and mail this opinionaire TODAY!

Sincerely,
Charles R. DuVall
Charles R. DuVall
Research Consultant

No. ____________________
(for office use only)

CONSUMERS POWER COMPANY **NEEDS ASSESSMENT**

Please tell us a little bit about yourself and your school. CIRCLE the most appropriate response. Your responses will be entered in the computer for analysis.

1. Which of the following best describes your present position in the school?
   - (01) A. Lower Elementary Grade Teacher (K-3)
   - (02) B. Upper Elementary Grade Teacher (4-6)
   - (03) C. Jr. High (Middle) Social Studies Tchr.
   - (04) D. Jr. High (Middle) Science Teacher
   - (05) E. Senior High Social Studies Teacher
   - (06) F. Senior High Science Teacher
   - (07) G. Building Principal
   - (08) H. Central Office Administrator
   - (09) I. Superintendent of Schools
   - (10) J. Other ______________________________

2. To which of the following organizations do you belong? (Circle ALL appropriate responses.)
   - (01) A. National Education Assn. (NEA)
   - (02) B. Michigan Education Assn. (MEA)
   - (03) C. National Council/Social Studies (NCSS)
   - (04) D. Michigan Council/Social Studies (MCSS)
   - (05) E. National Science Teachers Assn. (NSTA)
   - (06) F. Michigan Science Teachers Assn. (MSTA)
   - (07) G. American Federation of Teachers (AFT)
   - (08) H. Michigan Federation of Teachers (MFT)
   - (09) I. Other ______________________________
   - (10) J. I belong to no profession related organizations.

3. How many years of experience do you have as either a teacher and/or administrator?

Teacher		Years Exp.	Admin.	Teacher		Years Exp.	Admin.
(01)	A.	1 - 3	N. (11)	(05)	E.	21 - 30	R. (15)
(02)	B.	4 - 7	O. (12)	(06)	F.	31 - 40	S. (16)
(03)	C.	8 - 10	P. (13)	(07)	G.	41+	T. (17)
(04)	D.	11 - 20	Q (14)	(08)	H.	No experience	U. (18)

4. Do (did) you use free (sponsored) educational materials with your class(es)?
   - (01) A. Yes Why?
   - (02) B. No
   - (03) C. Not sure

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Copy of Page 2 of Opinionaire

5. Do (did) you use free (sponsored) educational materials provided by Consumers Power Company with your class(es)?.

(01) A. Yes Why?
(02) B. No
(03) C. Not sure

6. Have you received (seen) the 1982-83 GUIDE TO TEACHING RESOURCES (catalog) provided your school by Consumers Power Company?

(01) A. Yes Have you an opinion about this catalog and its contents?
(02) B. No
(03) C. Not sure

7. Does your school administration encourage you to use free (sponsored) educational materials provided by business, industry and government agencies?

(01) A, Yes Please tell us how this is done?
(02) B. No
(03) C. Not sure

8. What uses are YOU presently making of free (sponsored)educational materials? (Circle ALL appropriate)

(01) A. As an aid to stimulate student interest.
(02) B. As supplementary material in a unit
(03) C. As basic material in a unit.
(04) D. As reference materials in planning units.
(05) E. As special material for special reports by individuals and groups.
(06) F. As reference material upon which a class discussion is based,
(07) G. As part of a bulletin board/display
(08) H. As enrichment reading for the brighter students
(09) I. As basic reading material for all students.
(10) J. As supplementary reading material for slower students.
(11) K. As a workbook when the materials are set up to be used in this manner.
(12) L. As a planned part of a unit.
(13) M. As material added casually.
(14) N. As material for demonstrations.
(15) O. As reference material for surveying vocational interests.
(16) P. As material for student made scrapbooks and posters.
(17) Q. Other. ______________________________

9. What types of free (sponsored) educational materials would be most useful to YOU? (Circle ALL appropriate responses.)

(01) A. Pamphlets giving a prose description w/illustrations.
(02) B. Pamphlets of the "comic book" type.
(03) C. A series of illustrated pamphlets related to one topic.
(04) D. Materials (worksheets) for seatwork.
(05) E. Wall charts
(06) F. Wall maps
(07) G. Filmstrips
(08) H. Motion Pictures (16 mm.)
(09) I. Media Kits (filmstrips & cassette)
(10) J. Video Cassettes
(11) K. Sample Display Kits
(12) L. Sample Demonstration Kits
(13) M. Graphic presentations
(14) N. Field trips
(15) O. Guest speakers (resource persons)
(16) P. Role Playing Activities
(17) Q. Other ______________________________

Remarks:

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Copy of Page 3 of Opinionaire

10. What features do you like to see in free (sponsored) educational materials? (Circle ALL appropriate
(01) A. Objective presentation of all important facts.
(02) B. Writing and make-up similar to that contained in textbooks.
(03) C. Special attention to grade levels.
(04) D. Special attention to reading levels.
(05) E. Cross reference to other published materials.
(06) F. Suggested discussion topics or subjects.
(07) G. Self-evaluation questions on grasp of content.
(08) H. Tests to accompany materials.
(09) I. Suggestions for activities and further exploration.
(10) J. Provision for individual differences in suggested activities.
(11) K. Graphic and pictorial materials with a minimum of prose description.
(12) L. Scrapbook technique so students may complete their own story.
(13) M. Wide use of color for aesthetic appeal.
(14) N. Copies in quantity.
(15) O. Spirit master stencils for activity sheets.
(16) P. Provision for making transparencies.
(17) Q. Other ______

Remarks:

.1. Consumers Power Company provides free (sponsored) educational materials in six (6) broad categories in their GUIDE TO TEACHING RESOURCES. Please mark that which you value highest with a one (1), next highest with a two (2), etc. Please rank order all six (6) categories from highest to lowest (highest -1-2-3-4-5-6- lowest).

A. ______ Teacher Reference Materials
B. ____ Video Tapes
C. ____ Media Kits
D. ____ Films
E. ____ Filmstrips
F. ____ Literature

If Consumers Power Company were to prepare and distribute educational materials explaining energy conservation, would you consider using these materials with your class(es)?

(01) A. Yes
(02) B. No
(03) C. Not sure

What would YOU like to see included in these materials?
(OR Why would you not use these materials?)

3. If Consumers Power Company were to prepare and distribute educational materials explaining the Michigan Economic Development Program, would you consider using these materials with your class(es)?

(01) A. Yes
(02) B. No
(03) C. Not sure

What would YOU like to see included in these educational materials?
(OR Why would you not use these materials?)

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Copy of Page 4 of Opinionaire

14. If Consumers Power Company were to prepare and distribute educational materials explaining the economic factors of the rate structure of regulated industries (e.g. electric power and gas companies), would you consider using these materials with your class(es)?

(01) A. Yes What would YOU like to see included in these materials?
(02) B. No (OR Why would you not use these materials?)
(03) C. Not sure

15. If Consumers Power Company were to prepare and distribute educational materials explaining the use of nuclear fission to produce electric energy, would you consider using these materials with your class(es)?

(01) A. Yes What would YOU like to see included in these educational materials?
(02) B. No (OR Why would you not use these materials?)
(03) C. Not sure

16. If Consumers Power Company were to prepare and distribute educational materials explaining the ecological factors involved in the "acid rain" problem, or other environmental problems, would you consider using these materials with your class(es)?

(01) A. Yes What would YOU like to see included in these educational materials?
(02) B. No (OR Why would you not use these materials?)
(03) C. Not sure

17. Use this space for any additional suggestions YOU may have to help Consumers Power Company improve the educational materials offered to schools and teachers. (Use additional sheets of paper if necessary.)

Please return to:

Charles R. DuVall & Associates
Research Consultants
1520 Berkshire Drive
South Bend IN 46614

Copy of Follow-up Postcards

Principals

Dear Principal:

On October 15th we mailed you an opinionaire regarding your perception of the free educational materials furnished by CONSUMERS POWER COMPANY. Also included were two additional instruments for your teachers (Science & Social Studies).

Please check your files to determine if this survey instrument has been answered and returned. Your response is valued. If you distributed the instruments to your staff members as requested--we haven't heard from them either. A gentle "PROD" would be appreciated.

If this reminder and your response have crossed in the mail, THANKS!!! The results of this survey are important if your staff is to continue to receive educational help from CPC.

Sincerely,

Charles R. DuVall & Associates
1520 Berkshire Drive
South Bend IN 46614

Teachers

Dear Teacher:

On October 15th we mailed an opinionaire to your principal. He/she gave it to you. This instrument solicited your perception of the free educational materials furnished by CONSUMERS POWER COMPANY.

Please check your files to determine if this survey instrument has been answered and returned. Your response is valued.

If this reminder and your response have crossed in the mail, THANKS!!! The results of this survey are important if you and others are to continue to receive educational help from CPC. Help us to help you--return the opinionaire.

Sincerely,

Charles R. DuVall & Associates
1520 Berkshire Drive
South Bend IN 46614

APPENDIX I

Responses received from senior high social studies teachers to open-end questions in the survey of opinions regarding the types of materials they would like to see Consumers Power Company provide their schools.

__Appendix I-1__: Responses received from senior high social studies teachers to the question "Do (did) you use free (sponsored) educational materials with your class(es)? Why?"

I'll use anything to help the students understanding. (550002)

Because its free. (550004)

Sometimes. (550005)

Movie films that are appropriate for my consumer edu & economic classes. (550006)

Have not received any. (550012)

Hard to find appropriate ones in U.S. History. (550015)

They were helpful. (550017)

With the decline in school dollars it is the only way to provide a variety of teaching materials. (550022)

They usually were educational and no cost. (550029)

Sometimes as bulletin board material or to supplement a unit of study. (t50030)

If its good material its the best way to introduce new materials. (550032)

Too difficult to obtain on specified dates. (550034)

Cost and if I can use it. (550036)

It was appropriate for the unit I was covering. (550037)

When they teach and don't advertise or present a slanted viewpoing. (550038)

To supplement the text, current affairs. (550039)

Because they are free. (550040)

When appropriate, excellent source. (550041)

Availability, lack of money, usefulness. (550043)

Often the only way to get up to date material. (550046)

Adds to the textbook material also is a good change of pace. (550048)

I use movies to supplement my lecture and discussion in U.S. history. (550049)

Students can learn from them. (550050)

Up to date. (550053)

Usually more current than materials held by schools. (550054)

Free & if appro. (550058)

We have an excellent film series on Michigan. (550059)

For information. (550061)

Need material relating to local area. (550062)

Usually better quality. (550063)

When it pertains to subject matter it can be very useful. (550065)

Little money in district to order. (550067)

Up-dated & appropriate. (550069)

Materials from the NFIB that were geared for economics. (550070)

They are often more up-to-date than materials we have. (550071)

Many are well done. The "free" part is also a major consideration. (550074)

If they are worthwhile. (550076)

Too hard to get sometimes, just do not fit into my plans. (550078)

Up-dated, interesting, useful. (550079)

1) $$; 2) usefulness. (550080)

To supplement and reinforce classroom teaching and learning. (550081)

Sometimes. (550084)

Supplementary materials to regular text. (550085)

Quality. (550086)

Cost and type of program. (550087)

To supplement materials available locally. (550088)

Because they covered areas in greater depth than did the text and/or no text materials were available. (550090)

A little bit--budget considerations. (550092)

They were available--"Consumers Energy Program" films--gas company. (550093)

1) Variety; 2) financial reasons; 3) some material is well prepared. (550095)

Helps add to class without any cost. (550101)

Michigan history class--need additional sources of information. (550102)

Very low ed. funding. (550103)

Funds are scarce. (550104)

I teach Mich. hist. & much free material is excellent. (550106)

School district will not pay postage on return. (550107)

They were appropriate to the subject begin studied. (550109)

Good information. (550111)

To illustrate subject areas. (550112)

Where appropriate I have used them to broaden the perspective of the topic under study. (550113)

Good source of information. (550115)

Good outside srouce of info. (550117)

Gives us a broader reach of materials. (550118)

It had application to something under study. (550125)

Professional prepared materials are useful. (550126)

Increased materials to choose from. (550128)

Offers some worthwhile materials at no or low cost to the school. (550129)

Because we cannot afford to buy more appropriate ones. (550130)

When material is unbiased and educational, I am most willing to use materials from corporations. (550132)

Some of the material is very informative. (550134)

Free and useful; Grand Rapids Press filmstrips--current events. (550135)

Help explain position quickly. (550136)

Up to date. Can be informative and entertaining. (550138)

Appropriate. (550140)

It provides needed information. (550143)

Often, very up-to-date. (550144)

They were relevant to the course. (550147)

Free & fit what was teaching. To add to lecture, class discussion, etc. (550148)

Useful supplement. (550153)

Informative. (550154)

Why not? (550156)

In a limited manner--preview as necessary. (550158)

Usefulness & availability. (550161)

Very little funding is available for rental materials. (550162)

They tend to be "chest pounders" for the companies producing material. (550167)

Professionally done materials--high level of interest to students and because of economics. (550169)

For a more varied educational experience. (550170)

To highlight important issues. (550174)

Some are well done and very useful. (550176)

Usually well done--interesting to students; many materials too expensive to own. (450003)

For variety in instruction. (450004)

Supplement text material. (450005)

Did not receive information. (450006)

Brings outside information into the classroom. (450008)

For depth; for stimulation. (450009)

Exposure. (450011)

Tied in with the units we were doing. (450012)

Good material at no cost. (450015)

Because they were free and pertinent to unit studied. (450018)

They are usually very good. (450020)

Yes, because they are free and not available from other sources. (450021)

Good info for careers class. (450024)

Current--up-to-date materials; free--can't afford to buy anything. (550182)

Sometimes--not this year. (550183)

Obviously because the price is right to begin with, but they must also be available with a reasonable length of time and be of high quality. (550187)

When available and when they relate to material in class. (550188)

Not available. (450028)

They are good supplements to the course outline. (450029)

They were high interest. (450031)

Appendix I-2: Responses received from senior high social studies teachers to the question "Do (did) you use free (sponsored) educational materials provided by Consumers Power Company with your class(es)? Why?"

Filmstrip on Crosswhite Case years ago. (550001)

I'll use anything to help the students understanding. (550002)

Not now, but I have in the past. (550004)

Didn't know any were available. (550006)

Corporation organization. (550008)

Fit teaching plans. (550010)

Have not received any. (550012)

Informative, accurate, well presented. (550014)

Unaware of the. (550018)

Not aware of their usefullness in my classes. (550021)

Some is very good! (550027)

If its good material its the best way to introduce new materials. (550032)

Didn't receive any. (550033)

Too difficult to obtain on specified dates. (550034)

At one time I could use it. (550036)

They were available and timely. (550039)

Have not seen any. (550043)

It fit in with the particular subject area. (550048)

They are appropriate and available most of the time. (550049)

Applicable 2nd semester only. (550051)

Up to date. (550053)

Only available source. (550054)

Don't have any. (550058)

It is good material. (550059)

When I can. Have up to date! (550063)

Relevant and current. 0550067)

If they relate to what I'm teaching and because we have limited funds for audio visual. (550068

Unaware of availability. (550069)

Did not find anything applicable. (550070)

Easily available--newer--often covering topics on which we have no material. (550071)

I have used CP films in the past. They are well done and do not attempt to let the viewer know about CP every minute. (550074)

Michigan films. (550078)

Not available for my program. (550079)

They were current and were applicable. (550081)

Too much uncertainty on my part as to the content of the material. (550084)

Sometimes. (550084)

Quality of Consumers Power Materials. (550086)

Because the information provided material on energy, and related topics. (550087)

To supplement materials available locally. (550088)

Because they covered areas in greater depth than did the text and/or no text materials were available. (559990)

Have never received any. (550091)

Timely. (550093)

Not applicable. (550094)

Not too many available in American history. (550096)

Did not know it was avialable. (550097)

Wasn't aware of their availability. (550101)

3-part series on Michigan is excellent. (550102)

Free. (550103)

Always high caliber. (550104)

Excellent Mich. material. (550106)

School district will not pay postage on return. (550107)

They were appropriate to the subject being studied. (550109)

Good information. (550111)

The related to the topic. (550112)

They were interesting and appropriate to the topic under study. 550113)

Good info. (550117)

They sponsored films with very few "commercial" messages. (550121)

Films available. (550122)

Don"t pay attention to sender--only the material received--if it isn't commercial. (550125)

Appropriate/well done/informative. (550127)

Through int. school media center. I would like a catalog from Cons. Power if one is available. (550128)

It fit into what I am teaching. (550129)

When they fill a need. Not real often I'm afraid. (550130)

Excellent quality. (550131)

These are materials usually supplied to the Intermediate School districts, which is then distributed to schools. Usually movies. (550132)

Some of the material is very informative. (550134)

Didn't receive. (550138)

Did not receive any. (550140)

Little appropriate. (550142)

It's the only way I can get the info they give. Up-to-date, well-done, hold interest. (550144)

In government class to illustrate the working of private enterprise and provoke disucssion on government role in regulation of economy. (550146)

Fit Mich. hist course I was teaching. (550148)

Why not? (550156)

1st opportunity to see catalog is 82-83 edition. (550157)

In a limited manner--previewing necessary. (550158)

Good material. (550161)

Excellent films for Michigan history. (550162)

Interesting films. (550163)

They tend to be "chest pounders" for the companies producing material. (550167)

They pertain to the subject matter (Mich. hist.) that I teach. (550168)

As answered in question #4. (550169)

Once or twice only. (550172)

Found them to be well done. and up to date. (550174)

Not any that are useful in my area. (550176)

When they fit into curriculum. Have used some good films--not often. (450003)

For variety and additional topics. (450004)

Because it was current info and fit curriculum. (450005)

Did not receive any information. (450006)

For depth; for stimulation. (450009)

Good material. (450011)

Used it with an consumers buying unit. (450012)

Good material at no cost. (450015)

Some were pertinent--free. (450018)

Usually good. (450020)

Because they are usually of current interest. (450021)

Not often -- some films. (550178)

Free--good materials--up to date. (550182)

Films--Michigan history (3) by way of the regional school offices. (550183)

Appropriate for Mich history. (550184)

Availability unknown previously. (550185)

Appendix I-3: Responses received from senior high social studies teachers to the question "Have you received (seen) the 1982-83 GUIDE TO TEACHING RESOURCES (catalog) provided your school by Consumers Power Company? Have you an opinion about this catalog and its contents?"

Would like to receive a copy. (550005)

Good material and selection. (550008)

Excellent. (550010) (550103)

Good. (550054) (550067) (550071) (550156)

Our copy is in our library. I would like to have a personal copy of it. (550065)

Should use less advertising. (550068)

Very helpful. (550070)

Great. (550080)

But I haven't had the opportunity to examine it. (550087)

Looks good. (550088) (550094)

Well done and easy to use. (550090)

I will now order. (550099)

Wish it was a little wider in topics. (550118)

A.V. Dept.? (550127)

Good--usable. (550129)

Yes, it's easy to see if there are films & info to be used in any subject area. (550144)

It seems to have very useful items. (550146)

Good, but not applicable to my present courses. I passed it on to Mich. hist. teachers. (550156)

Thank you for your support of education. (550162)

Turned it over to science teacher. (450003)

Well annotated. (450007)

Looks good. (450008)

Have not looked closely. (450009)

Good selections; good material for various age groups. (450024)

Only recently. (550185)

Appendix I-4: Responses received from senior high social studies teachers to the question "Does your school administration encourage you to use free (sponsored) educational materials provided by business, industry and government agencies? Please tell us how this is done?"

Media center circulation. (550002)

By providing with information concerning free materials. (550003)

"Go ahead and use it." (550006)

Backs field trips sponsored by Bus./Education Alliance. (550008)

Through resource center. (550010)

Memo. (550014)

Not often. (550015)

Use brochures sent to teachers. (550017)

Copies are sent to teachers. (550020)

By individuals only. (550023)

Recommended materials, provides with new lists, etc. (550026)

It's not discouraged. (550028)

Through faculty meetings. (550029)

Suggest to teachers if materials are good. (550031)

Our administrator is concerned, in the case of private industry, that materials will be biased. (550034)

No objections raised; materials are made available. (550041)

Memos and samples placed in the school mailbox. (550043)

Letting us know various sources of what is available. (550049)

Administration leaves it up to each teacher. (550050)

Materials made available--no formal encouragement. (550058)

Pamphlets available in office. (550059)

The administration encourages us to order films and other materials. (550063)

They should make available these materials! (550063)

Teachers do this on their own. (550065)

Catalogs provided. (550067)

By keeping us aware of what is available. (550070)

Supplies us with info. (550071)

We are encouraged but we usually find out about them on our own. (550074)

We are told that the cost of mailing (return) must be taken from the film budget. In a way, this discourages the use of films and filmstrips. (550074)

We just do on our own because of lack of funds and some material is excellent. (550079)

By cooperating. (550080)

No restrictions are placed on teachers who order films. The local supply of films islimited. (550081)

Placing in my mailbox being department head. (550085)

Although librarian will pass on information. (550087)

By giving to S.S. chairman. (550091)

Making literature avialable. (550093)

Give us literature on free material. (550095)

Teachers can use free material without adm approval. (550095)

Makes catalogues available to us. (550100)

By sending samples through the intra-school mail. (550101)

Put info into our mailboxes only for our decision whether to use or not. (550102)

Provides copies. (550103)

Through dept. meetings. (550104)

School pays return postage. (550106)

Brochures and catalogues are distributed to department chairpersons. (550113)

1) at monthly teachers meetings/ 2) use of films. (550117)

Verbal--giving of pamphlets. (550122)

Not discouraged because they are unaware of all materials used by the classroom teacher. (550125)

Anything to increase cooperation and to cut expense. (550126)

Posting or ciruclating catalogs/brochures, etc. (550130)

Faculty meetings. (550131)

Yes, material must first be reviewed and then presented with curriculum studies. (550132)

Teacher's meetings. (550134)

Admin & dept chairperson. (550138)

Material passed on or distributed to dept. chairman. (550140)

Nothing--only catalogs to dept. chairman. (550142)

Pays for return postage. (550144)

Administrative verbal encouragement. (550145)

Pay without question postage and provides us with various free material catalogues. (550146)

Informally & verbally. Also no $ available for anything else. (550148)

Through AV dept. & library. (550156)

By passing on catalogs, etc., and each person ordering their own. (550157)

Catalogs and sources are accessible; ordering is efficient through a centeral media department. (550162)

Through department chairman. (550174)

We order them, then use them as we see fit. No administrative interference. (450001)

Through word of mouth. Film guides are turned over to appropriate teachers. (450003)

Information is passed from teacher to teacher. (450004)

Materials comes to us in our individual mailboxes. (450005)

Speakers, films, filmstrips. (450006)

They pass on literature to departments. (450007)

Passes literature on to us. (450008)

Catalogs of materials. (450009)

Provides us with catalogs mentioning the educational materials. (450010)

Provides us with information. (450015)

Through faculty meetings. (450020)

Information is distributed to dept. heads. (450021)

Booklets (guides) are always distributed to us. (450024)

They forward information to the appropriate people. (550187)

Flat out--use them if you can. (550182)

No emphasis except by Media Center. (550185)

They forward information to the appropriate people. (550187)

Mainly as source material--usually just placed in ar bos in faculty room. 450027)

By making catalogs available. (450028)

Material is screened then given to appropriate students. (450030)

When they send things to the schools, I send for it and use it. (450031)

Appendix I-5: Responses received from senior high social studies teachers to the question "What uses are YOU presently making of free (sponsored) educational materials?"

I'm not presently teaching geography--when I do--I have a unit on energy and environment. (550020)

None, have plenty of material available. (550088)

Most films and filmstrips as planned parts of a unit. (450016)

Appendix I-6: Responses received from senior high social studies teachers to the question "What types of free (sponsored) educational materials would be most useful to YOU?"

E. Corporation organization charts-business flow charts. (550008)

Resource people. (550080)

I use 8 tapes produced by W.M.U. "Voices from Michigan's Past." (550102)

It really depends on the topic. (550130)

No $ for field trips. (550148)

All the above--any materials with "strengths" are used! (550169)

Anything that is sent to me I like to use. (450031)

Appendix I-7: Responses received from senior high social studies teachers to the question "What features do you like to see in free (sponsored) educational materials?"

Activity sheets which can be copied (not spirit master). (550031)

I do not like obvious advertising. It is expected that a particular viewpoint will be observed but this should be done in a restrained manner. (550046)

History, government involvement in business. (550088)

All the above--any materials with "strengths" are used! Materials can be applied to all levels and capabilities of each student. (550169)

All I use is films (colored films). (450015)

Anything you can send would be helpful. (450031)

Appendix I-8: Responses received from senior high social studies teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining energy conservation, would you consider using these materials with your class(es)? What would YOU like to see included in these materials? (OR Why would you not use these materials?)"

Michigan Indians. (550002)

Though I have a personal interest, I do not feel it's an appropriate topic for my classes. If I had extra time in class, I'd use it. (550004)

I would have to see what is available before I would use it. (550006)

Global view--comparative statistics from around the world. (550007)

More interested in business organization and laws and regulations concerning utilities. (550008)

Consumers Power Company's point of view--a biased approach. (550012)

Objectivity; practical application for students. (550011)

Does not pertain to subject matter taught. (550013)

Objectivity. (550014)

Little use in Am. history. (550015)

Ways to conserve enrgy; energy saving devices. (550017)

Energy conservatin is of vital essence today and tomorrow's adult citizenry needs to be aware of the importance of using energy wisely and prudently. (550018)

Specific items that students could relate tolike, how much water or paper an average family uses in a week, etc. (550020)

As long as it is objective--all too often "Industrial" material is slanted toward that--industry. (550024)

VHS video tapes. (550025)

Future alternatives--cost--tried & true. (550026)

Energy conservation; alternate energy sources; proper insulation, etc. (550027)

I teach world history & I don't think this would apply. (550029)

What new forms of energy are being considered? How can we conserve energy? What's in the future? (550030)

General knowledge of student. (550032)

It would depend on how appropriate they were to the course. (550034)

Alternate energy source--solar, geothermal. (550035)

In the subject matter I teach, energy conservation is not covered. (550037)

There are other course priorities. (550038)

If they were objectively presented, including the various opinions. (550039)

We get basic generation distribution, etc. of elec & gas in science. I like material relating to actual use. What makes good-bad appliances, safety tips--how good-bad wiring jobs differ, etc. (550046)

How energy conservation affects the overall economy of the U.S. 7 world. (550050)

Case study (conservation issue applicable to N.W. Michigan counties) for class evaluation and discussion in economics class. (550051)

Some type of initial media presentation with follow-up "hands-on" student activity. (550054)

School bldg useage and materials. (550058)

It is good to receive information from a source that does not pretend to be anything, but a manufacturer of energy. (550059)

Not just Consumers Power Company acitvities in reguard to energy conservation, but also include your remarkable conservation record. (550065(

Home energy audit, outside (home) conservation (550067)

Practical hints for student use. (550069)

Practical items that could be integrated into a curriculum easily. (550070)

It would depend on subjects being taught, how materials worked in with a unit, etc. (550071)

I would like to see the unit presented as a consumer education material.
2. Suggested student activities that are workable in a classroom. (550074)

A complete analysis of energy conservation now and in the future. (550078)

Energy sources, energy problems, future supply, new sources, forseeable changes in energy use. (550081)

Not applicable. (550084)

Relevant materials to government studies. (550085)

Charts, media kits, films or videotapes. (550087)

Not applicalbe to my subject matter. (550094)

I would wish to preview. Objectivity would be important. (550095)

Appropriate to course material. (550100)

Anything that gets main ideas across. (550172)

Basic consumer education/awareness, application. Sound practices in the "limited dollar" area.

If not propaganda for CP. (550167)

Protection of water area. (550163)

We would use the materials in a contemporary world issues class; please include current studies on energy. (550162)

How conservation can work--how much to expect from conservation guidelines for choices to people. (550158)

Practical material, for lowering costs as a consumer. Facts, especially statistics showing $ value and amount of waste by people who have bad energy habits. (550148)

In current events, because that is an ongoing problem, trace it from 72 to current date with 10-20-year projections. (550146)

Simple ways that all can do. (550144)

If it fits the curriculum being taught. (550142)

Home conservation. (550140)

How to--ways of implementing now. (550138)

Items dealing with the environment. (550132)

In Michigan history. (550130)

Probably not--since it does not apply to what I teach as much as in other courses. (550129)

Only where appropriate; if course work relates. (550127)

Sources of energy, usages of fuels, costs of various fuels, future fuels. (550126)

Reference to this area is spontaneous and casual. (550125)

American history--could not use. (550122)

To help with my energy conservation program. (550117)

I would consider using these in my sociology classes if they stressed the sociological implications of energy conservation. I could also see them used in an economics or geography class (possibly government) (550113)

Cost factors or savings, what will C.P. do if everyone conserves and uses less gas? (550111)

But I have a few questions: 1) Would the cost of these be taken from shareholder's profits or used to reduce tax liability? If the latter, then they're not really free; are they? We all pay for them. 2) Instead of providing "free" materials, why don't you simply lower your rates? Then schools might pay for their own materials. (550109)

Nuclear? Lake preservation?

It is dealt in the science classes--not in history. (550102)

Career information, job openings, and opportunities. (550101)

Does not apply enough in my area to devote time out of a tight schedule! (550166)

Do not teach related subject. (550153)

Information on all up & coming energy types. (550149)

Explain proposal D. (550147)

Concept that energy fossil fuels are finite. (550143)

A comprehensive overview of the problem, what is presently being done. future needs and cares. (550136)

A totally objective approach. (550115)

Nuclear pro & con., solar, fossil fuels, wind. (550110)

Truth. (450003)

I would like a variety of activities for students to do which would give them a better understanding of the topic. (450004)

Current energy information facts. (450006)

If I would not use them, I would pass them on to the science teachers. (450007)

A discussion from a Michigan perspective. (450009)

Not applicable to class. (450014)

I don't cover energy. (450015)

If presentation of material was objective & appropriate to grade level. (450018)

Mentioned above. (450020)

Aim toward consumer economics. Study sheets, filmstrips (films). (450021)

Some problems which students would have to calculate to emphasize energy usage. (450024)

Would be more appropriate to science classes. (450025)

This topic could be/is a part of several social studies classes. (550187)

Objectivity!! Pros and cons nuclear power, environment, etc. (550183)

I would fear this material could lack objectivity but I would probably use it. (550181)

1. different types of energy; 2. ways to conserve; 3. reasons why we should conserve; 4. future forms of energy; 5. how life will change in the future if we conserve and if we don't. (450029)

Appendix I-9: Responses received from senior high social studies teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining the Michigan Economic Development Program, would you consider using these materials with your class(es)? What would YOU like to see included in these educational materials? (OR Why would you not use these materials?)"

The future! Mat'l for H.S. seniors. (550002)

I'd have to evaluate the materials first. I might use it if I felt it was objective. (550004)

For understanding economic growth. (550008)

Consumers Power Company's point of view--a biased approach. (550012)

Full-simple explanation. (550014)

Perhaps in U.S. government. (550015)

Maps of the state and important cities. Road maps of state showing highways and freeway systems, towns, cities, etc. (550017)

I'm not sure what the program would encompass, but from the title it would seem to have application for Michigan high school students. (550018)

As long as it was Michigan Development and not Consumers.

Employment possibilities for youth and young adult--stress training/ed needed. (550026)

I do not teach anything on Michigan. (550029)

Consider. (550034)

1) Comprehensive booklet with a variety of activities, discussion questions, etc. (I use the booklet put out by the N.Y. Stock Exchange each year. Follow the format of that publication.) 2) Film. (550037)

If objective. (550046)

Handouts with questions. (550048)

Application to N.W. Mich: 1) film or filmstrip; 2) worksheets for case study with discussion guide for case study. (550051)

Depend on grade levels and time available. (550054)

Commercials. (550059)

Something practical--something the student can use, or will use. (550069)

The material should be suitable for average to below average students. (550074)

Comparative plans, progress reports, problems and problem analysis, future achievement potential. (550081)

Relevant materials to government studies. (550085)

I don't know what the development program is, but I would like to know more about it. (550087)

Economic classes. (550088)

If not propaganda for CP. (550167)

Perhaps in Consumer survival classes we would make use of the materials. (550162)

Advantages to the political community; disadvantages of this program. (550158)

In the economics section, to explain the duties funding & accomplishments of EDC. comparison to other state EDCs.

Not familiar with the program. (550144)

If it fits the curriculum being taught. (550142)

How to--ways of implementing now. (550138)

Graphs and wallcharts. (550132)

General basic material to be used in Michigan Civics class. (550131)

Depends on material content. (550130)

Possibly yes--it might just fit in well in a unit I do. (550129)

Our department would--gov't and econ classes. (550127)

Too a subject, no. (550126)

No direct application to subjects taught. (550125)

Michigan history. (550122)

To help broaden students awareness of what the future holds. (550117)

Future plans for Michigan. Comparisons with other states. (550111)

Energy cost in residence. (550103)

Economic, history, government, science, in one? (550102)

Career information, job openings, and opportunities. (550101)

Reasons for loss of big business. (550171)

Explanation of goals & how plans would contribute to the accomplishment of those goals. (550166)

Not appropriate grade level. (450003)

A simplified presentation with film/filmstrip and an activity/work-book. (450004)

Material not of interest to lower grades. (450008)

We would like to incorporate updated Mich. Economics because it is integral part of current events. (450010)

Simplicity. (450011)

Not applicable. (450014)

I don't cover economics. (450015)

Doesn't apply to my discipline. (450024)

A simplistic approach to the economics of energy (I teach 6th grade level) (450029)

Role of government and private enterprise. More about the capitalistic system. (450030)

Because in our school we can use all the materials we can get. (450031)

Appendix I-10: Responses received from senior high social studies teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining the economic factors of the rate structure of regulated industries (e.g. electric power and gas companies), would you consider using these materials with your class(es)? What would YOU like to see included in these materials? (OR Why would you not use thesematerials?)"

Econ. class--why, what & future--Am. issues class. (550002)

I strongly question if Cons. Power Co. could be objective on this topic. (550004)

Dealing with gov't regulation. (550008)

Consumers Power Company's point of view--a biased approach. (550012)

Simple data, explained well, avoid confusion. (550014)

Too complicated. (550015)

How to read gas & electric meters in the homes. How to figure gas & electric bills, etc. (550017)

I realize that future mature adults need to be aware of these economic factors since most of the public complains of high rates without understanding how those rates are determined. (550018)

Material should not be too technical. Comprehension for student as well as teacher is on a lower level. Like: How much will this cost me? (550020)

Must be objective in approach. (550021)

I'll decide after the election--let's see how _________ Proposal "d" is. (550024)

Video tapes. (550025)

They have no value in ancient history. (550029)

I think it would not interest the students. (550030)

Some info on consumerism. (550032)

Boring to students. (550035)

The materials would have to be objective. (550037)

Students have little interest. (550038)

Probably would not directly to my class. (550039)

Would depend on open-mindedness of presentation. (550040)

Not appropriate for our area of study. (550041)

If comparisons with other states are made and the material is not too self-serving. (550046)

As part of voter decisions on Propositions D & H. (550047)

Charts or graphs for comparisons. (550048)

Short film accompanied by charts, graphs for overhead proj., or wall with worksheet and discussion guide. (550051)

Inappropriate to all but economics classes. (550054)

The public does not understand those rate charts and codes. (550058)

Wouldn't fit with units of study in my classes. (550065)

Must be objective. (550069)

I am not sure that H.S. students need this type of information. (550074)

Consumer info. Students have the right to know this. Rate cost breakdown. (550079)

How regulations affect both the consumer and the producer. Why regulations exist. Cost factors weighed against benefits. (550081)

Charts and explanation, some visual accompaniment; e.g. film or video tape. (550087)

Charts, filmstrips. (550094)

Unbiased presentation. (550095)

Not applicable. (550096)

Depends. (550098)

Pro & con why the rates change. How they can plan when the students start their own homes. (550101)

Science class-not in Mich. hist. (550102)

Explanations of cost factors. (550104)

Probably above my students' interest & comprehension levels. (550110)

Objective facts. (550111)

No direct application to subjects taught. (550125)

Comparison study. (550126)

Govt & economics. (550127)

Probably no--covered in other courses here. (550129)

Depend on objectivity and brevity of material. (550131)

What are rates, KW's, cu. ft./¢--how and why the rate structure was created, the implication of higher rates for the company, the customer, the country. (550136)

Basics. (550138)

Facts & figures--how it relates to consumers--home owners & renters. (550142)

Rate structures explained in basic terms. (550143)

The simplified explanation of the rating system who is consulted? (550146)

After your attack on proposal D it is doubtful that you could produce an unbiased presentation on utilities. (550147)

Statistics of all kinds and reasoning for this system. (550148)

It depends if it fit into course outline. (550149)

Essential information and rationale for choices made. There is much general ignorance about power cos' operation. Show relationship of business to gov't regulation. (550158)

Probably not an area that most social studies teachers at SHS would cover. (550162)

Diagraming of rate setting process. Factors that determine rate changes! (550166)

If not biased. (550167)

Would be useful to economics courses. (450025)

I don't cover economics. (450015)

Not applicable. (450014)

Input. (450011)

This is something that students should have an understanding of. (450010)

Above interest level. (450008)

Something at a level for 7th/8th graders. It should be colorful and simplify the topic. (450004)

Not appropriate grade level. (450003)

Suitable for economics class. (450007)

Current rate facts & projections of future goals. (450006)

Unbiased accounts--not the type of public information as portrayed in the advertisements against Proposal D. (450001)

We certainly need an explanation for your rapidly-rising, no competition rates! (550185)

Honest, unbiased information! (550186)

This would be of limited use. Perhaps only in our economics class. (550187)

If the material were presented simply and concisely. (450030)

As stated before, it must be in a simple format. (450029)

Appendix I-11: Responses received from senior high social studies teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining the use of nuclear fission to produce electric energy, would you consider using these materials with your class(es)? What would YOU like to see included in these educational materials? What would YOU like to see included in these educational materials? (OR Why would you not use these materials?)

Econ. class--why, what & future--Am. Issues class. (550002)

Except for regulation. (550008)

Consumers Power Company's point of view--a biased approach. (550012)

Explained in "lay" terms. (550011)

Does not pertain to subject matter being taught. (550013)

Need careful explanation of nuclear fission--do not over simplify. (550014)

For those interested. (550015)

Machinery used to produce fission; materials used in the process, where gotten. Cost of materials; cover supplying these materials; may show location of these materials around the world. (550017)

I believe America's future will be tied to the use of nuclear fission as an energy source to replace oil and gas whenever possible. (550018)

Include data on the advantages as well as the disadvantages of nuclear fission. Cost, danger, etc.--charts--descriptions of how it works (plants). (550020)

Topic discussed in science. (550022)

Video tapes. (550025)

Safety factor. (550026)

I only teach history, not science. (550029)

Maybe in a science class but not in social science. (550030)

Both pro and con nuclear power--advantages and disadvantages--waste accidents, etc. (550035)

Economics is my subject. (550038)

If presented objectively. (550039)

Does not apply. (550040)

Not appropriate for our area of study. (550041)

Would not fit as well in my social studies classes. (550043)

BUT ONLY if problems of waste disposal and possible dangers of accident are also objectively discussed. (550046)

Does not apply to my economics classes. (550050)

For political science class unit on political action--debate filmstressing safety precautions & disposal/examine health hazards for nonprotection. (550051)

Inappropriate to current courses taught. (550054)

Again public ignorance. (550058)

I would like to know if the waste materials are being properly taken care of. Also, I would like to know what can be produced for the waste materials. (550059)

Safety regulations in construction and operation of a nuclear plant. Federal laws, state laws, and company policy. (550065)

How it works, expenses, when it would be ready (feasible) (550067)

Must be understandable for grade level. (550069)

This, I believe, is more appropriate for a science class. (550074)

Not sure. (550078) (550081)

Charts & explanation, some visual accompaniment; e.g. film or video tape, (550087)

Not applicable. (550094) (550100)

Unbiased presentation. (550095)

Safe or not? Why? (550101)

Science class. (550102)

Explanations of cost factors. (550104)

Pro vs. con. (550110)

Health facts. (550111)

I would use these if they stressed socio-economic implications. (550113)

Everyone schould be aware of potential & dangers. (550117)

Include dangers involved. (550121)

No direct application to subjects taught. (550125)

Not related. (550127)

Other courses cover this. (550129)

Effect on jobs. Type of skills needed, education needed. (550132)

A good presentation on safety, eost, and potential hazards. (550136)

Positive & negative aspects. (550142)

Nuclear costs vs. fossil fuel costs. (550143)

To show cleaning difference between fission & what is used now. (550144)

The potential benefit; ie, lowering of costs, the potential dangers (TMI possibilities). (550146)

Basic explanation of how it works, why it is best. Drawbacks. And all statistics relevant. (550148)

Graphic display. (550149)

Simple explanation of the process. (550153)

I would like to see fusion material. (550155)

Physics classes-social studies. (550156)

Safeguards, physical processes involved, complexity of plant design, basic aspects of power production not generally known to "outsiders." (550158)

General overview. (550161)

Probably not an area that most social studies teachers at SHS would cover. (550162)

Not applicable for time available. (550166)

Personally, I have my doubts on the development of nuclear power. 3 Mile Island--the aftermath, evaluation of damage, as certainly been thought provoking. (550169)

Talk about fusion and what you are doing to bring down costs through research and development, rather than constantly raising rates. (450001)

Visuals; not too technical in language. (450005)

What it is, how it would be used, destructive power. (450012)

I would pass them on to science teachers. (450007)

Something that could be supplemented to our energy text. (450004)

Nuclear power plant being built in the area. (450008)

Not applicable. (450014)

I don't cover nuclear power. (450015)

Emphasize the safety and economy of fission. (450024)

Would be more appropriate to science dept. (450025)

This topic is more sicence-oriented. (550187)

Appendix I-12: Responses received from senior high social studies teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining the ecological factors involved in the "acid rain" problem, or other environmental problems, would you consider using these materials with your class(es)? What would YOU like to see included in these educational materials? (OR Why would you not use these materials?)"

Am. issues class & econ. class--why, what & future . (550002)

Except for regulation. (550008)

Relate unit to economics. (550010)

Consumers Power Company's point of view--a biased approach. (550012)

Explained in "lay" terms. (550011)

Objectivity--clear explanation of chemical process. (550014)

The problem and what being done about it; effects of acid rain on business, environment, chemicals, food chains, etc. (550017)

Effects on us. What we can do to help. etc.--films would be great. (550020)

Topic discussed in science. (550022)

How objective? Will Consumers take responsibility for "acid rain"? (550024_

Video tapes. (550025)

This is for some type of a science class. (550029)

This would be geared to science classes. (550030)

Evidence of where it comes from, how produced, etc. (550035)

I would want pamphlets which could be used as supplementary materials. (550037)

Economics is my subject. (550038)

Content? (550040)

Not appropriate for our area of study. (550041)

Again--only if fairness in presenting both sides is observed. (550046)

As society's problem. (550047)

Have to touch on economics of the problem. (550050)

For political action debate; present both sides of issues: film or filmstrip, worksheet & discussion guide. (550051)

Dependent on time available. (550054)

Comparison figure--charts--graphs concerning the real damage of the acid rain. (550059)

What is the problem, how's it dealt with and what are the potential dangers if left unchecked. (550065)

Air, water, noise, waste. (550067)

Again, would depend upon subjects being taught and how materials fit in w/ lessons. (550071)

This, I believe, is more appropriate for a science class. (550074)

All honest reasons for this problem and what can and will be done--along with both Canadian/American govt. input and cooperation. (550078)

Any health factors affected by the above situations. (550079)

1. Pertinent current data, 2) control measures that are taken, 3) international relations problems, 4) possible solutions. (550081)

Charts & explanation; some visual accompaniment; e.g., film or video tape. (550087)

Not applicable. (550094)

Unbiased presentation. (550095)

Not applicable. (550100)

Some real facts about acid rain. (550104)

Health facts. (550111)

I would like to see included cross-cultural implications (Canada/U.S.). I would also like to see comparisons and contrasts to acid fog (e.g. London--ca. 1952). (550113)

Important to future of mankind. (550117)

No direct application to subjects taught. (550125)

Much needed. (550126)

Current problems/govt. (550127)

In "social problems." (550129)

Especially if they can emphasize Michigan in the material. (550131)

Social impact on foreign relations, the problems of being a good nieghbor to help clean up. (550136)

What it is--what to do. (550138)

For sicence. (550142)

The Truth. (550143)

_________ reasons explaining what is causing it and how we can stop doing it. (550144)

This is more for science. (550146)

Causes or source. (550147)

Definition of what it is. Explanation of why it happens. What can be done ...especially at individual level. (550148)

Scientific information tests and results; political aspects of controversy/alternatives--reasons for choices made by industry. (550158)

This is a timely topic for contemporary world issues. (550162)

Not applicable to field of study. (550166)

If unbiased. (550167)

Give the viewpoints of all the people in Canada and New England whom we dump on. (450001)

This would be better covered in science not my social studies. (450012)

I would pass them on to science teachers. (450007)

I'm not sure how I can fit it into my topics. (450004)

Should be made known to students. (450008)

Not applicable. (450014)

I don't cover ecology. (450015)

1) the sources of the problem; 2) effects on biosphere; 3) possible solutions. (450024)

Would be more appropriate to science dept. (450025)

This topic could be used in several possible social studies classes. Topics: effects on people currently, in the future, etc. (550187)

Appendix I-13: Responses received from senior high social studies teachers to the question "Use this space for any additional suggestions YOU may have to help Consumers Power Company improve the educational materials offered to schools and teachers. (Use additional sheets of paper if necessary.)"

I liked When Mich. Was Young (MP); more of this only on Mich. Indians and other Great Lakes Indians--past & present. The War of 1812--Tecumseh. (550002)

Say "yes" to Mich! (550004)

Materials on coproration organization, slaary of officers and employees, how many stockholders, and career opportunities. (550008)

Film on many and all topics discussed. Film in color, brochures, demonstrations, etc. (550017)

I would probably show most of Consumers material. We could sort out what is or is not objective--subjective. (550024)

You could improve educational materials to schools by producing films or buying films from National Geographic that have more to do with other fields beside science. (550029)

My concern with any of the above issues is bias. Consumer Power has a vested interest. (550033)

45 days ahead too far ahead to plan for the use of materials. 800 number to call in orders. 1 week service. (550035)

I liked the 17 minute films that Consumers Power used to sponsor on current topics of interest. (550037)

You would better serve your cause by having one or two good films. (550038)

I use as much material as I can as I believe in letting students make up their own mind but, for school use, I have to avoid biased and/or weighted material. (550046)

If you prepare and distribute materials listed above please contact me. Thank you. (550050)

Examine pros & cons; students at h.s. level are turned off by propaganda illustrating paternalism on part of big business. (550051)

Consumer Power is trying to do its part in promoting a good source of energy. Also, is apparent 'ot the public is not sure what is happening. I feel that more work ought to be done to explain the positive side of energy production. (550059)

I sue those on oil. (550066)

Worlsheets. (550067)

12-16 questions depends on how you present material. (550068)

Materials should be: 1) objective; 2) accurate; 3) be adapted to various reading levels. (550069)

I really don't know what suggestions to make. I have not used any materials; perhaps if I try some in class, I will have a better idea of what to expect. (550070)

In regards to your survey of educational materials, I would susggest the following to you: 1. That a five year plan would put us four years behind times. With modern progress, I would suggest that a survey be done in the middle of each year to determine needs for the beginning of the next year. 2. Material must be factual and not propaganda. (550072)

I like the films on Michigan history. We could use more material as good as this. (550076)

Make the material simple, honest and relevant to a future consumer/citizen. (550079)

All materials are worthwhile to a class with a teacher who is innovative at all. (550080)

Distribution is a problem; perhaps local service offices could help with this. I'm not familiar with your distribution system. (550081)

Energy & environment materials. (550083)

More Michigan history materials (those prepared in the past have been most helpful). (550089)

There is a very limited amount of media materials for teaching a Michigan history class. More films, f.s., and tape stoires of events-incident could be produced, running up to a maximum time of 30-45 minutes, Michigan in WWI, WWII, Michigan Indians & reservations--Michigan rivers systems, etc. (550102)

Make sure new resource people are used in the development of programs so that new ideas are presented yearly. (550106)

Michigan history films on time period since WWI. Decade by decade or by time period--Depression, WW 2, cold war, etc. (550111)

My use of materials would depend on the quality and objectivity. (550124)

Keep up the good work you have done in the past. (550129)

Visual materials must be entertaining as well as educational. (550130)

Screen News Digest movies--are great!! especially the government/civics/ science ones. I even like the commercial before the movie!! (550131)

I've used your materials & really like them. I would suggest anything that deals with showing the Great Lakes, Mich. area. Example: The River That Came Back. (550144)

1. Explaining more fully positions on ballott proposal that affect CPC, not only this year (a little late for school) but in any future ballott proposals that can be useful in school. (550146)

We have used your material it is well done. (550156)

I appreciate this questionaire. (550158)

You are most generous in an area that is becoming so costly for school systems' budgets. (550162)

Need facts on general economics. (550166)

Consumers Power puts out some very good material, however, much of it is saturated with "what Consumers Power is doing to alleviate the problem." (550167)

I really don't find a lot of value in materials from Consumer Power as my social studies units are history oriented. (550176)

Would like to see some films dealing with worldwide energy crisis--(especially as it relates to the Mideast). (450025)

It would be good to have a classroom teacher preview materials before publication. Often, in the past, materials were difficult to integrate with grade levels. (450018)

Some of the Michigan history films are in sad shape--could they be put on video cassette? They are very good films and I want to continue to use them. (450019)

I am especially interested in materials in Michigan for classes in Michigan history. (450007)

The materials most useful, in my opinion, to classroom teachers are: 16mm films, sound filmstrips, materials to be duplicated for classroom use. (550187)

A good test to go along with reading materials. (550182)

The materials I've seen are fine--I have found it more difficult to use because we have a rather unique set-up teaching history on highly organized with little chance to deviate; two teachers who work together. (450027)

APPENDIX J

Responses received from senior high scinece teachers to open-end questions in the survey of opinions regarding the types of materials they would like to see Consumers Power Company provide their schools.

Appendix J-1: Responses received from senior high science teachers to the question "Do (did) you use free (sponsored) educational materials with your class(es)? Why?"

Good information regarding energy. (460001)

Good extra input. (460002)

I plan to this year. (460004)

We developed an Energy Conservation class. The materials provided by Consumers are invaluable to the course. (460006)

To clarify and supplement concepts presented. (460007)

Information for students and myself is educational. (460008)

Related to material covered in classroom. (460010)

Because they're useful and available. (460011)

Because they supplement our science program. (460013)

To update text material. (460015)

Good materials, budget problems. (460016)

To raise energy conservation consciousness. (460017)

In a parochial school, materials are limited. Consequently, I make good use of free materials. (460018)

They are good materials; good services. (460019)

Free and variety. (460020)

Save money. (460021)

I thought they would be useful. (460022)

To broaden the students background. (460023)

Enrichment. (460024)

Inexpensive, variety, etc. (460027)

New in Michigan, as a teacher. (460029)

Free and high quality materials available. (560015)

It helps enrich the material in the courses. (560018)

Free. (560021)

Availability, usually well done, good supplements. (560023)

I use materials that are of interest & value to students. (560023)

Keep classes up to date with new technology & relevant. (560028)

Educational, up to date, informative, free. (560029)

Good information--current--price was right. (560032)

Can't pass by free items if they are good. (560033)

Supplement textbook material hopefully with more up to date information. (560035)

Most of the free educational materials are good--related to subject area. (560036)

Good supplement. (560037)

They often enrich or give additional information. (560038)

Most have info unable to get otherwise. (560040)

We can't afford to buy all the supplemental materials we need. (560042)

They're free. (560043)

Availability, contents, price. (560044)

Because it was good material. (560045)

Because the materials help the students relate to everyday things. (560048)

They are educationally and financially beneficial. (560049)

It was useful. (560050)

It is available and usually well done. (560052)

School budgets do not allow for many resources other than the necessities. (560054)

School finances. (560055)

Supplement text or course of study. (560056)

Useful as supplemental materials. (560060)

If it is useful. (560063)

Current materials. (560065)

Good motivators. Some are excellent in presenting basic concepts or illustrating skills. (560066)

Too hard to schedule. (560069)

These are more current than many other sources. (560071)

Cut expense if as good as something I can purchase. (560073)

Not appropriate for course. (560074)

To help supplement textbook material. (560075)

Curriculum content. (560076)

Useful, esp. w/ limited budgets. (560077)

Those related to topic. (560079)

Usually of better quality. (560083)

Excellent supplements normally cannot afford. (560084)

They explained & correlated with material I was covering! (560085)

Because it gives me a greater variety of resource material--various approaches or views. (560086)

Small budget--materials are usually very good. (560088)

Breaks in class routine; provides outside information. (560091)

Free, but mainly for the good educational reasons. (560092)

When related to subject. (560095)

Many good materials are available. Our school cannot afford to budget much for materials, therefore many students benefit from this program. (560096)

Some are appropriate & well done. (560097)

To enhance the class. (560098)

Money not available for film rentals. (560099)

Cost & films are good. (560103)

Supplemental; many of the films provide 6th career and technical information. (560104)

As a supplement, to diversify class. (560105)

Free. (560106)

Free and available. (560107)

Supplementary materials. (560110)

Ordering material & material is not on hand, or else films are already scheduled up. (560112)

Free materials applied to subject matter normally covered in class. (560113)

They never seem appropriate. (560116)

They are usually good; no cost; fairly easy to book. (560118)

They were good and timely. (560121)

I do not know of many that serve any useful need. (560122)

Educational enrichments--sometimes factual information, sometimes shows through films, places on things that possibly otherwise would not receive as much attention. (560127)

Good information, free. (560128)

Available and appropriate. (560129)

Usually very current. (560130)

Can supply valuable, current materials. (560131)

No money for outright purchases. (560132)

It is current and supplental. (560133)

They supply additional materials. (560134)

Good materials. (560136)

To the subject: specific topics. (560138)

Valuable alternative info. (560139)

To save $, good quality materials, especially relating to Michigan. (460140)

Some are very good. (560141)

Resource materials. (560007)

Sometimes the material is useful for only one time period. (560009)

Depends on the objectivity. (560010)

It was available and it pertained to the coursework at the time. (560012)

Some are excellent teaching aids. (560013)

Convenience and supportive. (560014)

Class enrichment for concept being taught! (560142)

Some are more appropriate or more up-to-date. (560143)

Either because supplies material I can't get anywhere else or economical. (560144)

Good source of supplemental materials. (560145)

Usually up to date material not found in text. (560146)

Provides information that I cannot otherwise provide. (560148)

Free. (560149)

If it fits the subject I'm covering. (560151)

Excellent source of current information. (560153)

Good materials, cost. (560155)

Because it enriches the classroom material. (560156)

I went to an after school explanation of a role simulation game. (560157)

Free. (560161)

To show an exact use; to differ teaching technique; to teach or expose an area I know little about. (560164)

Some are relevant. (560165)

To help illustrate certain topics--shell oil films, coal & oil formations, etc. (560170)

They enrich the experience. (560171)

They are available and funds are low. Most materials I use are very helpful. (560173)

Informative. (560176)

What I use is excellent material and we can afford it. (560177)

It was a good way to enrich classroom activity. (560179)

Valuable matterial added to course content. (560181)

Because they were good. (560183)

Were "broke"--and many are excellent. (560185)

Material was more up to date than texts. (560186)

Cost is right. (560193)

Because they're free. (560194)

When they fit into my objectives or the goals of the department. (460195)

It's free! (560198)

Very little. (560199)

These materials usually make topics more interesting. (560200)'

Because of the expert manner in which it is put together. (560201)

Was not aware of them. (560202)

They are excellent (wise) (560203)

Enrichment, supplement. (560204)

Informational (although sometimes biased). (560206)

Many are better than those I can purchase. (560207)

They fit in well. (560208)

To add to classroom studies. (560209)

Materials were free and appropriate. (560210)

I find most of them to be very useful. (460031)

Use various things carried over year after year. (460032)

Appendix J-2: Responses received from senior high science teachers to the question "Do (did) you use free (sponsored) educational materials provided by Consumers Power Company with your class(es)? Why?"

Good. (460002)

I plan to this year. (460004)

None provided. (460005)

We developed an Energy Conservation class. The materials provided by Consumers are invaluable to the course. (460006)

Information for students and myself is educational. (460008)

Movies for chem class. (460012)

Because they are a good supplement to our program. (460013)

Good materials, budget. (460016)

They are high quality materials and relevant to my curriculum. (460018)

Good up-to-date materials. Good service, mostly appliable in a hi school. (460020)

Free and variety. (460020)

I thought they would be useful. (460022)

It enhances my teaching about environmental problems. (460024)

Enrichment. (460025)

It occasionally goes along with our units. (460027)

What materials? (460029)

Variety, for up to date info, to supplement text. (460004)

Price was right & it's good. (460005)

Because they fit with the topic being studied. (560003)

Wasn't provided to me. (560004)

Price was right & it's good. (560005)

A few times when I had gen. science or environmental science. (560009)

Some. (560010)

It is not available for me to check its source and I can't remember. (560012)

Some are excellent teaching aids. (560013)

None available at the time. (560014)

Modern materials. (560015)

Availability & subject relationship. (560016)

They're good supplemental material. (560018)

Free--fits curriculum. (560021)

Availability, usually well done, good supplements. (560023)

Difficult to acquire. The procedure of acquiring the materials was not explicit or hard to find. (560028)

Educational, up to date, informative, free. (560029)

I taught about energy & related areas--topic covered were offered and current. (560032)

Haven't seen any! (560033)

The films were very good. (560036)

They often enrich or give additional information. (560038)

Closest energy company. (560040)

They have had some good materials. (560042)

Wasn't surethat they were available to us (not in Consumer's area). (560043)

Availability. (560044)

Gives the students anotherviewpoint. (560048)

Difficulty in scheduling free films. (560049)

Not familiar with it. (560052)

No, _______ on order. (560053)

Generally it is pertinent to biology classes. (560055)

To supplement text or course of study. (560056)

Little or no application in chem & physics or health. (560057)

Related to my field. (560058)

They were useful. (560059)

Apply to my subject area. (560060)

Reliable and good themes. (560060)

It was useful. (560063)

Good material. (560065)

Excellent presentation of commercial applications of science and technology. Useful, well planned teacher guides are also available. (560066)

Too hard to schedule materials were not appropriate to subject matter. (560069)

I feel the quality is good. (560071)

Too difficult to schedule, so that topic fits the classroom topics. (560072)

Cuts expense if good or something I can purchase. (560073)

Not appropriate for class. (560074)

Curriculum content (fits our program). (560076)

Some are applicable to earth science. (560077)

They are good films. (560083

Lacked biological significance. (560084)

Some--as it applies to electricity, nuclear power or ecology. (560086)

Accessible and very good. (560088)

CP sent description of available and easy order form. (560089)

Well done materials, pertinent to classes taught. (560091)

Worthwhile! (560092)

Excellent materials & directed at local problems. (560093)

Never seemed appropriate. (560095)

Many were excellent for biology and ecology classes. (560096)

Appropriate and well done. (560097)

Good series on Mich. hist. (560099)

Excellent material when studying energy. (560100)

Yes, but not recently. (560102)

Covered material I cover. (560103)

Provides local information (Mich, etc.) about environment, history, etc. (560104)

Good selection of films! (560106)

Not very much. (560107)

Unaware that material were available until recently. (560115)

They are usually good; no cost! fairly easy to book. (560118)

Most films, other materials recently have dealt with energy (gas & electric) conservation and my biology classes don't seem to fit into my limited time frame. (560119)

I haven't taken time to find out what is available. (560122)

Available and covered or reinforced a topic that we covered. (560127)

History of Mich. & geology. (560128)

Applicable to subject. (560130)

Covers energy story completely. (560131)

No money for outright purchase. (560132)

Only when it is available and covers (topic) related. Often these do not occur at the same time. (560133)

They supply additional materials. (560134)

Good materials. (560136)

Covers certain areas in detail. (560138)

Valuable alternative info. (560139)

Materials often pertain to Michigan--these are not available from other sources. (560140)

The material was a local condition in our state. (560141)

Not always pertinent to what is being taught.... (560142)

Some are more appropriate or more up-to-date. (560143)

Very close to Midland Nuclear Power plant under construction and interest in shown in this project. Also energy conservation. (560146)

Material appears to be related to elementary or junior high classes or high school classes that are of a general nature rather than chemistry. (560148)

It was useful to the area I was covering. (560151)

Often not to chemical in ways related directly to the lesson or amount of material we are responsible to cover does not leave time for extra materials not already a part of system's delivery system. (560152)

Educational, useful. (560153)

Other materials. (560155)

Because it represented the efforts of a local industry to communicate some information of scientific value. Have not used in past several years because elementary schools had already shown to their classes. (560156)

I went to an afterschool explanation of a role simulation game. (560157)

Free, and relates well to energy units I teach. (560161)

Because it related to what I teach. They do an excellent job on their topics. (560164)

Not available. (560168)

I have in the past--comic book--nuclear power. (560170)

They were closely related to what I was doing. (560171)

Useful. (560173)

They stopped the program I was told, by Cons. Power. (560175)

Too biased. (560177)

Readily available, generally well done. (560179)

Very educational--well done! (560182)

Appropriate for classroom discussion, and your materials are very well done. (560185)

Material was more up to date than texts. (560186)

Appropriate content. (560188)

Appropriate material for class. (560193)

We were studying nuclear energy. (560194)

They fit my objectives. (560195)

Convenient. (560198)

They add interest and variety to various topics. (560200)

It is excellent material that is geared for the type of class I teach. (560201)

Was not aware of them. (560202)

Occasional films that apply. (560204)

Informational (although sometimes biased). (560206)

I teach a class in eergy and Consumer Power has helped me in many ways including printed materials. (560207)

Germaine, pertinent. (560208)

Not available and wrong emphasis. (560210)

Films mostly to re-enforce material covered in class as well as provide additional informatin. (460031)

Appendix J-3: Rspponses received from senior high science teachers to the question "Have you received (seen) the 1982-83 GUIDE TO TEACHING RESOURCES (catalog) provided your school by Consumers Power Company? Have you an opinion about this catalog and its contents?"

Yes, it looks very interesting and I plan to order several items. (460004)

Not seen. (460005)

Fantastic educational materials! I order films, literature and make use of conservation speakers. Last year our librarian arranged for the Energy Van to visit our school. (460006)

Good. (460008) (460014) (460024)

Easy to use. (460011)

Not yet. (460012)

It's well organized and informative. (460016)

Yes, it's excellent! (460018)

Great work, I have ordered several things and films so far. (460019)

Not much different from others. (460020)

More film spaces on the order cards (not just two!). (460024)

Haven't received it yet. (460026)

Haven't looked at it close enough yet. (460027)

I've seen a guide but am not sure it's for 82-83. (560003)

It seems excellent. (560005)

I did receive something earlier this year that could have been this guide. (560012)

It looks very good. (560013)

It's fine. (560018)

It looks better organized with better student activities. (560025)

Excellent. (560029)

It is useful. (560042)

Not really. (560043)

Excellent organization and content. (560049)

More biolgoy needed. (560054)

Please forward one. (560055)

Good. (560058) (560059) (560088) (560105)

Very good, descriptions--suggested used are helpfu. (560066)

Not yet. (560068)

Very good. (560075)

More films for physics with about a 30 min time would be useful. (560083)

Lots of variety to choose from. (560091)

Very well presented. (560093)

Some interesting things. (560094)

Many familiar titles which I have used successfully in the past. Some new things I will order. Looks good. (560096)

Good selection of materials. (560097)

Films could be more technical in science area. Written for general audiences. (560103)

Useful. (560104)

The films are becoming outdated. (560106)

Easy to use and helpful in planning a unit. (560115)

Has nothing I can use. (560116)

It looks good. (560118)

Well done and well organized. (560119)

I like the documentation with the films. (560127)

I pass it too ther teachers as it contains little related directly to biology. (560129)

Not yet--just received it. (560130)

I like it. (560131)

Excellent. (560132)

81-82 material presented well and easy to find due to design of catalog. (560132)

Well organized. (560141)

Somewhat biased in material presentations--but is well done. Personal opinion! (560142)

Nothing new. (560144)

Good, explains material and grade level. (560146)

I have not looked at it closely but have made it available to the teachers in my department. (560148)

Good. (560155)

Not yet. (560164)

Assume it is in media center. (560166)

Not complete enough--too simplistic. (560169)

Good catalogue. (560186)

It's OK. (560198)

Very useful. (560200)

Excellent. (560201)

Have used a few of the materials. (560207)

Good to have one. (560209)

Very helpful. (460031)

Appendix J-4: Responses received from senior high science teachers to the question "Does your school administration encourage you to use free (sponsored) educational materials provided by business, industry and government agencies? Please tell us how thisis done?"

Information is passed along to the teachers to use. (460001)

Science/math days. (460002)

Forward it to depts. (460006)

Stating the rich supply of resources these agencies provide us with. (460006)

They want us to use the best available teaching tools. (460009)

By passing on any information or borchure that comes in. (460009)

Brochures available for return. (460011)

Gives us the guides and pays for return of films. (460013)

All info sent to school is given to me if it is science related. (460015)

Distributing catalog, verbally, checking on what I've ordered. (4660016)

My principal distributed your catalogues to teachers who would most likely use them and encouraged us to make use of them. (460018)

He leaves that to the teachers. (460019)

One of your catalogues has been placed in our teacher's lounge. (460022)

Each teacher takes care of her or his own materials. (460023)

Materials (flyers) made available. (466024)

The administration sends all materials to the appropriate department and allows each department to determine whehther or not to use the material. (460025)

Makes available. (460026)

Just by distributing the booklets to teachers. (460027)

Mail is routed through dept. & individuals place own order. (560005)

No administration guidance in this area. (560010)

Not in so many words or with a set policy but the administrator in charge of the science department does see to it that brochures, pamphlets, catalogues and the like are available to us or at least we get to see a copy of such items. (560012)

Materials such as this and the catalog are circulated to appropriate teachers and departments. (560013)

Memo. (560015)

Moving available communication to the high school. (560016)

Fac. meetings. (560018)

School paid postage on sponsored films; time off to attend sponsored workshops. (560023)

Provide return postage for the borrowed material. (560028)

Nothing directly said one way or another. (560032)

By making sure we receive the literature from the sources. (560034)

Flyers in mailbox. (560035)

It is very easyfor us to order what we need. (560042)

I personally use them--by direct contact with distributors. (560043)

By contacting the business rep. of the company that serves our area. (560048)

Through distribution of catalogs. (560049)

Verbal. (560053)

Staff meetings--encourage use. (560054)

Limits are placed on spending. (560055)

Letting us know what is available. (560059)

Put in mailboxes. (560065)

Library maintains a section for free or inexpensive educational materials. Funds are budgeted for postage and other expenses related to their use. (560066)

Catalogs are hended tome. (560069)

Yes, keep budget low! (560073)

Have seen no emphasis on this. (560210)

To the extent of all local neutral--no directives. (560208)

They tell me about materials that are available which I might not know about. (560207)

He is very cooperative when asked to be involved in acquiring various materials. (560201)

Passing it on to us via school mail. (560200)

Appendix J-5: Responses received from senior high science teachers to the question "What uses are YOU presently making of free (sponsored) educational materials?"

Do not have! (460029)

Reference. (560098)

I have stopped using these kinds of materials because they are mostly too commercial in their presentation and do not attempt to be objective. They spend most of their time just trying to make their sponsor look good. (560102)

Not presently using any. (560107)

_____ petroclum company made available 9 films which are called, collectively, "Search for Solutions." They are excellent. They also sent outstanding written materials to be used with the films. THEY ARE NOT SLANTED! (560177)

Projects. (560006)

No present use. (560109)

I am presently not using any materials. (560203)

Appendix J-6: Responses received from senior high science teachers to the question "What types of free (sponsored) educational materials would be most useful to YOU?"

I have found wall charts and maps to be extremely helpful. Your "Electricity and Me" kit is excellent. (460006)

Workshops explaining recent industry innovations. (560023)

Overhead transparency, microcomputer programs. (560056)

Expecially in the high school sciences. (560066)

Any and all are welcomed and used. (560084)

Really liked your energy van. (560103)

Pro/con discussion. (560105)

Computer game simulation for Atari (only) please! Why not run a contest for schools using Atari to have their students write the program for you like the Heart Assoc. is. (560144)

Computer disc programs for Apple II (560151)

Background materials so I can new lessons. (560207)

Appendix J-7: Responses received from senior high science teachers to the question "What features do you like to see in free (sponsored) educational materials?"

"Objective presentation of all important facts."--not always true of Consumers. (460020)

Many times facts conflict with eadh other in today's world. I would like some good dilemma problems to use after showing a good film. These would be used to help students develop their own models. (560177)

Computer disc programs. (560151)

If its interesting and teachers a useful concept using sound educational approach I'll use it! (560144)

Spirit masters are often a problem, as many schools are using plain paper copies. (560132)

Sometimes free materials are set up to cover a much too wide educational level. (560115)

Most CP materials on ecology have not been objective. But have promoted nuclear power, etc. w/o regard to an objective discussion of results. (560107)

I teach earth science. Topics weather, energy, alternative, geology, soil (and are hydroelectrical, fusion fission, environmental problems, doal use & mining, jobs in consumers. (560103)

A movie showing career opportunities in science. (560003)

Good films on current topics. (560060)

I must assume a bias toward industry when using CP materials. If approved by N & BT or NSTA as unbiased, then would believe them & use material more. (560050)

Basically of a supplemental nature. (560043)

Actually all the above are helpful! (560005)

All are important! (460032)

Appendix J-8: Responses received from senior high science teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining energy conservation, would you consider using these materials with your class(es)? What would YOU like to see included in these materials? (OR Why would you not use these materials?)"

Illustrate need for energy conservation. Suggested ways to carry out suggestions. (460001)

Background information on our natural resources, ways to conserve energy and alternative forms of energy. (460004)

I would like to be able to have an electric meter as a classroom demonstration model. If possible, we could hook up appliances directly to the meter to see what appliances are the "energy consumers." (460006)

This type of material does not fit in with Life science which I teach. (460007)

Well designed kit that has "hands on" experiences for the students; easily understood. To be made appealing and colorful. A lot of basic information with practical ideas. (460009)

Very practical applications to the students lives. (460013)

Presentations of opposing sides concerning different kinds of energy production. (460016)

I haven't developed any units in energy conservation. (460018)

Solar plans; films on hot water. (460019)

Environmental concerns; info for S.W. Michigan. (460020)

I have found materials supplied by various companies to be biased. Both sides of the issue are usually given equal attention. I have quite a few free materials from Consumer's Power which I use with caution. (460022)

Charts and graphs on dwindling resources, way of conserving energy, ideas for other forms of energy. (460023)

Practical, household policies of conservation. (460024)

Would not use if geared to upper elem. levels. (460026)

Unbiased presentation of facts. (460029)

I'm not sure what I would cover. (5[illegible]0198)

We do a whole conservation unit--need participatory (not lecture) activities & activity sheets, (my kids need to produce something on paper to process info.). (560005)

1. Pre- and post-tests. 2. AV materials; 3. Information on ditto masters (spirit master stencils). (560200)

Recent and related facts to today's situation. (560201)

Only if they fit into course of study. (560003)

Current methods of obtaining energy sources; economics of alternative energy choices; energy and the consumer. (560006)

There is currently a lot available but most is not worthwhile. (560009)

Objective real life information; home energy survey; things to do at home as follow-up. (560010)

Not necessarily applicable in my course (biology) concern that the material would be politically biased. (560012)

An objective discussion of alternate energy sources, with the advantages and disadvantages or problems associated with each. Discussions, preferably in person, but more practically, on film, by proponents of the various alternativew. (560013)

Objective coverage applicable to high school ecology students. (560016)

Practical things, not theory. (560017)

Home/school/business energy cons. that students could do and show others. (560018)

No, I teach U.S. History. (560022)

Renewable energies, how to save heat that goes up the furnace chimney. (560023)

If I were teaching ecology. (560024)

Data on energy usage and resources with projections of how long different resources will last with questions to analyze the data. Also, feasibility of alternate energy sources with advantages and disadvantages. (560025)

Simple how to do instructions for home , car. Broad energy conservation efforts from industry. (560028)

Everything you have on energy production, use and conservation. I do a complete unit on this subject. (560029)

"Hands on" materials to evaluate energy usage in normal situations of individuals with an emphasis on creating student awareness of his/her role now and in the future. (560031)

Material should be totally honest and practical. (560038)

Actual examples of the effort input & the savings--teachniques so that students can see the job opportunities. (560040)

Alternative energy sources and effect of energy usage on the environment. (560042)

Broad range topics: 1) energy conservation as it relates to total environ. (protection); 2) ramifications. (560043)

1) All sources of energy, wind, water, etc. 2) Practical application in the home. (560045)

Prose description of problems and solutions. Relate in films different components of E crisis as economic, political, labor, technical, supply, demand. (560046)

1) Future energy sources; 2) Explanation of all the different energy sources; 3) Nuclear energy--pro and con. (560048)

Student check lists--at home, work or what they could do. Also, how about check list for school energy conservation. (560050)

Practical useful ideas. (560052)

Alternatives in handling energy. (560053)

Time is limited to cover the essential. (560054)

How, why, economic factors. (560055)

Probably refer to physical science teacher. (560056)

1. Non-nuclear, non-fossil fuel energy sources. 2. Renewable resources. 3. Protection of the environment. FILMS. (560060)

Solar, wind. (560062)

A history of; use per person, cost per unit, cost per person, future predictions. (560063)

Formulas; how to do instruction; do it yourself tests of insulation, insolation, elec. usage, gas usage. (560064)

We have in the past, used these materials. Emphasize facts, and as many related social and economic aspects as possible. (560066)

Basic material such as: electric circuits, parallel & series circuits, fission and fusion, how an atomic power plant works, how do we generate electricity, how an electric motor works. (560069)

The reasons the cost has significantly increased for energy that is produced here in our own country. What may be some alternative energy sources. 560071)

1) Update on alternate energy sources; 2) A good bibliography; 3) Relative safety--conventional or nuclear. (560073)

The energy story as it applies to Michigan. (560077)

We have an environmental course. (560081)

Alternative energy sources, solar energy, wind power. (560082)

Films, literature. (560083)

Would become an important tool in our environmental studies classes--(ecological, studies) as well as energy studies in physics--anything pertaining to these matters would become excellent supplements. (560084)

Energy is a part of my teaching schedule or it would be used! (560085)

Not only general or low level material but some at a higher level for physics students. Some work sheets and fact sheets which pre-engineering students could use. (560086)

Of course!! (560087)

1) Basic principles of energy; 2) Supply & formation; 3) Environmental effects; 4) Examples of conservation (practical). (560088)

What students can do specifically at home to conserve energy and see positive results from it. (560091)

Newest or most recent ways to conserve energy. (560092)

Conservation procedures based on $ savings/1000 ft house. (560093)

Energy transferred, use & how lost. (560095)

Alternate energy sources, how solar, wind, etc. can be used in practical ways. (560096)

Development of alternate sources of energy. (560099)

I doubt that they could objectively deal with this subject. (560102)

Combine passive solar, fission-fusion, active solar, ways to build (insulation) heat pumps, techniques used in state. (560103)

Non-renewable & renewable resources must be recycled; we have technology. Show the foolishness of a throw-away society! Build thing that can be repaired and to inst. personal responsibility. (560104)

Exploration of a nuclear power plant-interior. Use of new energy systems--tide, wind, solar applicable to home use. (560106)

I would if they were objective enough. (560107)

All sides of the energy question presented with facts, and rational. Would not use it if other sources presenting opposing views was not available (or included?) even though it's not the right point of view, from your point of view. (560109)

Ways in which students can conserve at home. Information on nuclear power and it's safety. (560113)

How economical questions are effected by large business. (560115)

Energy conservation isn't really part of the class I teach. It would be better to teach this subject in a more general science course. (560122)

Not certain exactly how without viewing the material. (560117)

More geology & tech material. (560128)

Methods of conservation, less prophecy of doom (more positive). (560130)

Ideas for home, work place conservation. Plans for energy saving devices (simple) (560131)

Only if they are relative to what we are doing at the time of availability. (560133)

Ecological concerns. (560134)

Posters--"take home" materials. (560136)

Should be specific to say solar--water, nuclear, wind. We have a lot of general films on "energy." (560138)

Present consumption statistics, funds, amt of saving. (560139)

Use of passive devices such as greenhouses, etc. to return energy consumption. (560140)

A list of all possible energy using gadgets to may be found in a "normal" home. How students check off the ones they have and have them keep only four. This becomes a "trade off" game. I do this and it gets them to think of our dependence in the 1930's. (560141)

Information other than on nuclear energy & hydro-electric--need more on solar, coal, geo-thermal, wind, wood. (560142)

Consumer benefits, money saving problems (worksheet) cost/usage, different appliances. (560143)

Practical means of conserving energy, especially in heat and electricity, solar energy, heat pumps. (560146)

If they were related to the basic principles taught in each type of class. Examples: biological principles, chemical principles, physical principles. (560148)

1. 16 film; 2. ditto or overhead study sheet & questions; 3. questions on computer disc. (560151)

But please an objective approach with both sides of an issue presented in equal balance--not a hidden sales pitch or sly pro Consumers propaganda blast. (560152)

a) written as a teaching unit--self contained units; b) activities. (560153)

We are currently not teaching an ecology-conservation course and only scattered mention would be made to energy in other classes. (560155)

I would have to see how objective you were. I would probably use it anyway to a certain extent but also present the other side of the coin. (560161)

In my classes we don't do much with energy conservation. (560162)

Objective presentation--no bias for or against nuclear power sources. (560167)

Especially solar, geothermal energy. (560170)

How the materials tie to geology. Earth science, etc. Relate materials to job development, geological make up of Michigan. (560171)

Material that would make students aware of the broad scope and dilemmas attached to energy usage. (560173)

Our limited resources! (560175)

Not related to biology. (560176)

Students need to learn how to think and to reach their own conclusions about ultimate consequences of their actions. (560177)

Something done at a level of service. High students not just elementary. (560179)

I would have to review the material before using in my class. (560183)

The need for conservation;measure that can be taken by school age (secondary) individuals; costs, financial and otherwise (political) if we don't. (560185)

The finite nature of fossil fueld. The need for inexpensive and efficient photovoltaic cells, and hydrogen generation as a fuel. (560187)

What are the most practical forms of energy conservation? (560188)

Things that kids could inform their parents about that would create energy savings at home. (560193)

Simulation games. (560203)

Optimistic approach, minimal use of technical terms, based on concepts taught in course, such as "combustion releases energy from fossil fuels--sun's energy stored there since fossils death." (560204)

Alt. lifestyles shown. (560206)

How bills are calculated, R factor of different materials, how to determine size furnace needed. (560207)

Not too much (?) narration, more on site situations-probs-conclusions. (560208)

I would have to see them first. (560209)

Appendix J-9: Responses received from senior high science teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining the Michigan Economic Development Program, would you consider using these materials with your class(es)? What would YOU like to see included in these educational materials? (OR Why would you not use these materials?)"

I don't feel it would be directly related to science. (460004)

Not appropriate for my subject area and age group. (460007)

The history leading to it, what's being done, possible solutions. (460016)

Business possibilities for jr. hi. pupils. (460019)

Don't apply well to my area. (460020)

I have found materials supplied by various companies to be biased. Both sides of the issue are usually given equal attention, I have quite a few free materials from Consumer's Power which I use with caution. (460022)

Objectives & value. (460024)

No, too advanced. (460026)

I'd be personally interested but would not be able to see applications to science class. How could cons. power be unbiased? (560003)

These would probably not be appropriate for most science classes. (560009)

Concern that it would be politically motivated and biased. (560012)

I think I would have difficulty working it into my science teaching--although perhaps I should attempt to do it (?). (560013)

I teach U.S. History. (560022)

Of little value to science classes. More appropriate social studies. (560023)

I teach health occupation and biology. (560024)

Best handle in other class. (560026)

I don't know much about this program. (560029)

In a science class it would depend on content. (560031)

I don't know what it is! (560033)

I feel this belongs more to social studies. (560042)

Not applicable to area. (560043)

Not my area. (560046)

Would consumer groups have a valid say in what went into the publication? (560050)

Material which would help explain what in heavens name economics is all about!!! (560052)

Not sure?? We are a suffering area. (560053)

Emphasize how people, and their attitudes may affect the program. (560066)

Possible future mobs for the students to be aware of. (560071)

Too commercial! I don't like presenting one-sided material. It gives the students no real choices when they must learn to make choices. (560075)

Gas, oil resources--where, how mucy, how formed, etc. Geological story behind the economic situation. (560077)

Not applicable to my discipline. (560083)

Not in sciences. (560084)

Prefer "straight" science facts. (560089)

Not my area being taught presently. (560091)

Might best be suited for social studies. (560096)

What is being done to bring more jobs to Mich. (560099)

Don't know what it is. (560103)

Probably not me, but I would recommend it to the business ed. teachers! (560104)

I would want to ensure that they were environmentally sound. (560107)

How economical questions are effected by large business. (560115)

This topic is not part of course objectives! (560122)

Irrelevant to my curriculum. (560125)

What it is! How we are going to be involved! Cost if we do not support the development program. (560127)

Why it is important to future generations; how it works; is it working? how can we help? (560130)

Not closely enough related to socience. (560131)

Only if they were truly objective. (560133)

Doesn't apply to science as much as other materials would. (560136)

Social science. (560138)

Probably won't integrate into my specific program--but I'd have to wait and see the program for final evaluation. (560140)

Would have to evaluate first! (560142)

Would have to see it first! (560144)

Not appropriate to science classes. (560148)

But please--on objective approach with both sides of an issue presented in equal balance--not a hidden sales pitch on sly pro Consumers propaganda blast. (560152)

I teach sci. not enough time for econ. (560157)

Not interested. (560162)

I do not know what this is. (560164)

Objective presentation--no bias for or against nuclear power sources. (560167)

As they relate to geology. (560171)

But I need to know more about the program myself. (560173)

I'm not familiar with the program. (560175)

Not related. (560176)

Not their field of expertise. (560179)

I would have to review the material before using in my class. (560183)

What will their content be? (560185)

Not appropriate. (560188)

Would have to see before I would make a yes or no statement. (560193)

I'm not interested in teaching about it. (560198)

Appropriateness. (560002)

Time allotment. (560210)

I would have to see them first. (560209)

Artistically appealing, sci correct, innovative. (560208)

Appendix J-10: Responses received from senior high science teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining the economic factors of the rate structure of regulated industries (e.g. electric power and gas companies), would you consider using these materials with your class(es)?" What would YOU like to see included in these materials? (OR Why would you not use these materials?)"

Tend to be rather slanted. (460002)

Not related to science. (460004)

Not appropriate to age level & subject. (460007)

Probably wouldn't be applicable to lower elementary. (460009)

Not necessary for chem class. --might be useful for economics, etc. (460011)

Description of it and what affects it. (460016)

Too much like propaganda! (460018)

Don't apply well to my area. (460020)

I have found materials supplied by various companies to be biased. Both sides of the issue are usually given equal attention, I have quite a few free materials from Consumer's Power which I use with caution. (460022)

Too advanced a concept. (460026)

Depends on the materials. (460029)

In apprropriate. (560002)

Might be too advanced, but business courses may use. (560005)

Probably not appropriate for science classes. (560069)

Probably would not apply; concern that it would be biased. (560012)

I think I would have difficulty wording it into my science teaching--although perhaps I should attempt to do it (?). (560013)

Of little value to science classes. More appropo to social studies. (560023)

General information. (560029)

Not applicable in my classes. (560031)

Not really applicable in science class. (560033)
Would not fit my science classes. (560042)

Not applicable. (560043)

N.A. to class. (560045)

Would consumer groups have a valid say in what went into the publication? (560050)

If they were reasonably objective! (560052)

Not science. (560054)

But only if the presentation were objective. I would not use it if it were just a means of justifying rate increases to students. (560055)

Not applicable to science classes. (560060)

I would rather see this included in other materials as aspects to consider rather a separate item. (560066)

Does not apply. (560083)

Not in sciences. (560084)

Nuclear. (560089)

Not interested in this area. (560091)

Not sure how it would fit in curriculum. (560095)

I would be interested in these. If they applied to ecology I could use them (energy savings). (560096)

No I would not care to hear again why we must pay more now for less fuel, or why when we use less fuel, they must charge us more to make up for their loss of volume sales. (560102)

Show how everything is developed. (560103)

Doesn't apply to my syllabus. (560107)

Could be very informative, to show complexity of rate structuring--or a snow job--could easily appear this way or be used to present company point of view (justification). (560109)

Help general public further understand. (560115)

Only if they were truly objective. (560133)

Irrelevant to my curriculum. (560125)

Does not fit into my cirriculum. (560140)

Would need to evaluate first, "consumer" is a "interest group"! Don't believe it is the responsibility of school to promote interest groups--only teach about them objectively. (560142)

Consumer benefits: money saving problems (worksheet), cost/usage, Different appliances. (560143)

They would have to be totally objective! I doubt this could be done. (560144)

How it relates to consumer. (560146)

Not applicable to my subject area. (560150)

But Please an objective approach with both sides of an issue presented in equal balance--not a hidden sales pitch on sly pro Consumers propaganda blast. (560152)

I teach school not enough time for econ. (560157)

Too complicated for them. (560165)

They would be better suited to a class we have entitled "Consumer Economics." (560171)

Not related. (560176)

Not relevant to my classes. (560179)

S.A.A. (560183)

As long as the materials are objective and are not propaganda for the utilities. (560186)

Not appropriate. (560188)

Not applicable to biology. (560198)

Effect of deregulation of natural gas, federal policy. (560207)

They would probably be too far removed from the area of sciences but I'd consider them. (560202)

Profit structure, loss and risk factors for investing in Consumer Power. (560203)

Assuming they are not hung up on the legal-scio concept of being underdogs or bottom person on the totem pole & have sci leanings and learnings. (560208)

Time constraints. M,ght make it availalbe for optional student use. (560210)

Appendix J-11: Responses received from senior high science teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining the use of nuclear fission to produce electric energy, would you consider using these materials with your class(es)? What would YOU like to see included in these educational materials? (OR Why would you not use these materials?)"

Charts, games, studies showing advantages. (460001)

Related to science. (460004)

Explain fission, processes involved, reactor, where U235 comes from and how it gets here, possible accidents and safety regulations. (460005)

A listing of pros and cons to nuclear fission. Perhaps articles fro and against nuclear energy so the student can be more objective in his decision regarding the energy source. (460006)

If I were to teach physical science. (460007)

Well designed kit that has "hands on" experiences for the students and easily understood. To be made appealing and colorful. A lot of basic information with practical ideas. (460009)

Only if it included the opposing side to using nuclear energy. (460016)

Your presentation would most likely be biased in favor of your nuclear power plants. I would prefer my students investigate more objective sources of information, so that they can make up their own minds. (460018)

Good supplement. (460020)

I have found materials supplied by various companies to be biased. Both sides of the issue are usually given equal attention, I have quite a few free materials from Consumer's Power which I use with caution. (460022)

How a reactor works? How safety is built in? Meaning of radivactivity. Construction of a nuclear power plant. (460023)

Not appropriate. (460026)

Media resources. (460029)

Would fit in with our unit on nuclear energy. (560001)

Define: fission, explain chain run, critical mass, fissionable isotopes, describe products and their properties, their means of storage, then describe part of reactor--how heat is transferred and generated. Discuss disposal transferred and generated. Discuss disposal problems and fear of gen'l public. (560003)

Problem explained and some mechanism for me to monitor as to whether they understand problem. Also would like to include values & decision-making aspects of this & other problems w/ social impact. (560005)

How plant operates--safety! Material should be realistic on rish/benefit. (560007)

Probably would not apply. (560012)

An objective and non-emotional discussion of the problems associated with this form of energy production, including response to the severe critics of it. (560013)

Diagram & explanation of commercial use. Safety features. (560014)

Objective coverage to be used to physical science classes. (560016)

A very good energy source, one which all should be considered by all. (560023)

Yes, if the materials presented an objective view. (560025)

Chemical theory behind nuclear fission and applications in future in industry and residential uses. (560028)

Detailed explanation of the structure, function and use of nuclear plants. Also--unbiased facts on safety and nuclear waste disposal. Production of nuclear fuel. Everything you have! (560029)

Explanation of the fussion process and the benefits. (560031)

How to be unbiased. (560033)

The distillation processes for seperating $^{D}20$. The difference between Am. system and the Can Du. (560040)

How nuclear wastes are treated. (560042)

1. Complete structuring of nuclear plant oper. 2. Pros & cons of utilizing nuclear energy. 3. Environ. implications. (560043)

No more needed unless they contain more factors (pro-con). (560046)

What are the dangers; how can we prevent catastrophes. (560048)

Probably not by itself, but would with other material on nuclear energy. (560050)

Why or why not being persued. How dispose w/ waste safely. (560055)

Protection of the environment. Disposal of nuclear wastes. (560060)

We use some now. We also use U.S. Navy personnel in their presentation. (560066)

We need to educate the people on the positive aspects of nuclear energy and its capabilities. There is too much negative publicity! (560071)

Something beyond the comic book level. (560073)

Basic explanation of fission process & difficulties involved. (560077)

This would be helpful in our study of nuclear physics. (560082)

Films. (560083)

Any info available as supplements to chemistry & physics curriculum. (560084)

1) Basic principles; 2) safety & environmental impact; 3) design; 4) pros & cons -- compared to other generation. (560088)

Future nuke developments. (560089)

Fits into science class topics. (560091)

Time is limited. (560093)

This is the fuel of the future!! (560094)

Heat & energy forms & transfer. (560095)

Diagrams of reactor, flow charts of fuel cycle. (560097)

Inherent bias. (560098)

What is being done to solve the nuclear waste problem. (560099)

Simple explanation. (560100)

Their films on nuclear energy never mention important issues such as hazards to the environment or populations. They present it only as a "good thing," with no problems. (560102)

Show cost of development, materials, problems you've had and how you've solved them. Being in environmental discussion. (560103)

I am against nuclear energy! Too many waste storage problems. (560104)

Explain fission--how the research resulted in a fission reaction plant--alternate uses of fission--medicines, space. (560106)

Again, must be environmentally sound. (560107)

More should be included on radiation levels at the plant sight, plant gate or boundary, natural rad. levels, types of potential problems, etc., not just energy availability. (560109)

Safety and explanation on how it works. (560113)

Process, latest discoveries, particle physics (sub atomic particles) (560114)

General knowledge. (560115)

Basic concepts of nuclear fission. (560122)

Real objectivity. (560126)

Answer some of the criticisms. (560130)

List benefits and potential dangers. (560131)

Only if they were truly objective. (560133)

Graphic explanations of materials. (560136)

Resources for that chapter covered. (560127)

Simple explanation of the process. (560139)

Does not fit into my program. (560140)

All pahses of the process and disposal of the nuclear waste. (560141)

In physics classes--only! (560142)

Cost/usage comparisons--coal/gas/^{H}20/ N.F. (560143)

Cost effectiveness, safety, etc. (560144)

Cost comparison, process, safety. (560146)

You do already? I am not able to cover nuclear chemistry. These materials are appropriate to physical science, physics, or environmental science classes. All of which are taught in our system. (560148)

1. 16mm films; 2. ditto or overhead question sheet or questions on computer disk. (560151)

This is badly needed--it must be done carefully so as to inform. Anti-nuclear groups are well organized (if uninformed) and would be quick to use __________ presentations to their advantage. (560152)

Only if they were unbiased in presentation. (560155)

Something showing the high technology involved in nuclear fission. How about a comparison between nuclear fusion and nuclear fission. (560156)

Background of fission and reactor type. (560157)

I would have to see how objective you were. I would probably use it anyway to a certain extent but also present the other side of the coin. (560161)

I'm very much interested in nuclear power--step-by-step of how the process works--knowledge of the safety features involved and--current statistics involving nuclear power. (560162)

Safety and controls. (560164)

Safety and controls. (560164)

If the presentation is without bias and disposal of nuclear wastes presented as environmental problem. (560167)

Snow close relationship to geology. (560171)

If it was objective. Up-to-date information. (560173)

Everyone is learning of nuclear power, however. I was an NDE Supt. at Fermi II so I would like material pointing out the QA and QC Programs. (560175)

Not related. (560176)

Actual photographs of inside a reactor complex not just diagrams. (560179)

1) Explanation of reactions taking place; 2. Diagrams of power plant;
3) Advantages & disadvantages of nuclear power. (560181)

I would have to review the material before using in my class. (560183)

What, how, when, costs, benefits, dangers, etc. (560185)

Not applicable. (560198)

Cost, financing, waste. (560207)

Unbiased treatment of topic. (560206)

1. filmstrip and cassette and/or 2. videotapes, 3. spirit master stencils. (560200)

Physics approach--high school level. (560204)

A comparison of nuclear risk in other exposure areas that the public is not aware, e.g., hospitals, to nuclear reactors. (560203)

I don't believe nuc fission-fusion is a werewolf or demon--I think its about time a case were made for the positive aspects. (560208)

Diagram, detailed explanation, worksheets, tests, readings. (560210)

Review basics of atomic structure, how fission occurs, how is it controlled, dangers. (460031)

Simplified diagrams showing process. (460032)

Appendix J-12: Responses received from senior high science teachers to the question "If Consumers Power Company were to prepare and distribute educational materials explaining the ecological factors involved in the "acid rain" problem, or other environmental problems, would you consider using these materials with your class(es)? What would YOU like to see included in these educational materials? (OR Why would you not use these materials?"

Materials showing effects of environmental problems on living organisms. (460001)

Related to science. (460004)

Definitely. (460005)

Some practical suggestions for it's control or things teenagers can do to improve or correct environmental problems. (460007)

Well designed kit that has "hands on" experiences for the students & easily understood. To be made appealing and colorful. A lot of basic information with practical ideas. (460009)

I have an environmental unit. I prefer resource materials (for reports) and films. (460011)

How it works on many items in our environment. (460019)

Info on SW Michigan: chemistry, experiments. (460020)

I have found materials supplied by various companies to be biased. Both sides of the issue are usually given equal attention. I have quite a few free materials from Consumer's Power which I use with caution. (460022)

I take one environmental topic each month as part of my chemistry courses. The topics include air pollution, water pollution, nuclear and solar energy. Other forms of energy, solid wastes, chemical toxic wastes, food additives and soil chemistry. I could use material and films on all these topics. (460023)

Date, statistics. (460024)

If adaptable. (460026)

Films or filmstrips. (460029)

Appropriate in ecology and maybe in physics & chem. (560001)

Both sides, the ecologic plus the company. (560002)

Only if they were unbiased. (560003)

This would be beneficial. (560006)

Concrete explanations, experiments that would be possible. (560009)

If done in an unbiased way. (560010)

Posters, charts: anything appropriate for display to attract interest in the topic and initiate discussion. (560012)

Again, I would want something objective and nonemotional. (560013)

Objectivity? (560014)

To be used in ecology classes--possibly chem classes--history, chemistry and ecology 'academic' account of the problem. (560016)

Timely; should be considered by all. (560023)

Cause and effect presentation of environmental problems with possible solutions (steps the average person can take to help solve the problem). (560025)

Biochemical intereactions of pollution: air, soil, water, plants. (560028)

Also an important area of study in my classes. I can use all the _____ (560029)

I know little of the effects. (560033)

The patterns generated by west stack. How far down wind and what is the size of the plume. (560040)

1. Broad range items; 2. complete honesty in dealing with subject. (560043)

No, but would be used in our biology classes. (560046)

What are the causes; how can it be prevented; what is the government doing to help environmental problems. (560048)

This would be very useful. (560050)

How produced, what ecological factors are--how can be changed. (560055)

Special emphasis on Michigan. (560056)

Objective material not biased in favor of the power companies. (560060)

Very important. (560062)

The historical and total environmental aspects of this problem. (560066)

The causes of acid rain and how we can avoid these problems with nuclear and other forms of energy. (560071)

Student experiments. (560076)

Cause and effect--where. (560077)

Very useful for chemistry as a practical application of their knowledge. (560082)

Very useful for chemistry as a practical application of their knowledge. (560082)

All such info for environmental studies. (560084)

1) Causes; 2) How widespread; 3) Alternatives for solving; 4) Effects. (560088)

Great Lakes area and Canada. (560089)

Applicable to biology classes which I teach. (560091)

Chemistry involved in change. (560092)

Lots of data from studies on both sides of the debate.

Whether they know for sure what causes acid rain. (560099)

Biological impact on the environment and animals. (560100)

Also include what you are doing--studies, equipment, what pollutants given off--your monitoring procedure, etc. (560103)

That effects are gradual and cumulative and therefore often unnoticed. (560104)

Effects on Mi. waters--streams, ponds, lakes and the big lakes--where it comes from and how & what we can do to control/stop this pollution effects upon aquatic fauna and flora/as well as terrestrial. (560106)

But--objective? (560107)

Exactly what would be the most benefit (sounds bood) in terms of the statement above. (560109)

General knowledge. (560115)

Many just cover energy conservation and yet the news is constantly talking about demonstrations, law suits, etc. based on violations of ecological principals. (560119)

Long range effects; how we can counteract. (560130)

Causes, effects, controversy with reguard to U.S./Canada. (560131)

Only if they were truly objective. (560133)

Application and hands on materials; pictorial representation. (560136)

Applies to what is being taught--pollution. (560127)

The Canadian government's viewpoint to be included. (560138)

This does fit into my program and is an important topic for discussion and study. (560140)

Cause, location, target regions where rain falls, effects and cures to the problem. (560141)

We do investigate ecological problems of this nature--could be useful information. (560142)

Suggested solutions and activities students can do. (560144)

Would have to evaluate them first. (560148)

16mm film, ditto or overhead follow-up questions. (560151)

If fairly balanced. (560152)

Farm crop damage, ground water damage. (560155)

How about a test kit to determine if we reside in an area of high acid rain. (560156)

Similar to Nov. 81 National Geographic article. (560157)

I would have to see how objective you were. I would probably use it anyway to a certain extent but also present the other side of the coin. (560161)

Types of acid rain. More than just coal produced. (560164)

If there is no bias. (560167)

Very much so. (560173)

Our international moral responsibility, especially for here. (560175)

Not relevant to my classes. (560179)

Sources of acid rain; 2. Chemical reactions involved; 3. Solutions to problem. (560181)

I would have to review the material before using in my class. (560183)

Objectivity. (560185)

Acid rain was a major subjedt at the recent NBTA Convention here in Detroit. I guess as recent as 1969 there was little or nothing on it. (560198)

Chemistry application. (560210)

Probably emissions from cars for a few yrs yet will be a greater prob. Acid rain should be equated with high sulfur coal or untreated stacks, though. (560208)

Not appropriate for my program. (560201)

Optimistic approach, minimal use of technical terms, based on concepts taught in course, such as "combustion releases energy from fossil fuels--sun's energy stored there since fossil's death." (560204)

1. Videotape, 2. spirit master stencils; 3. Games. (560200)

Types of coal mines, effect of mine acid in waste water on the landscape, effected areas of North America from acid rain (560207)

Appendix J-13: Responses received from senior high science teachers to the question "Use this space for any additional suggestions YOU may have to help Consumers Power Company improve the educational materials offered to schools and teachers."

Please send me any materials I can use now. (460005)

I find your films very useful. (460008)

I have used kits provided by Consumers in the past. I found the students were not interested for many reasons. They were at a high level (although specified for that grade) & were not appealing (appearances, color). Some dealt with information that was not of interest for that age level. (460009)

Prepared materials such as filmstrip kits, etc. should be brief & to the point. The topic should be able to be covered in one or two lessons, for the most part. (460022)

Thank you for this service. I have used your films and speakers for many years. (460023)

Your previous materials have been excellent. I hope to see more of it. (560001)

Science must be linked to social probs and issues, and kids need info and development of responsibility as citizens. I need help w/materials dealing with this--not only science facts. (560005)

Much of your material is not adult enough for high school chemistry and physics students. They are more prepared to evaluate a topic than the average layman. (560007)

Avoid overt attempts to propagandize. (560012)

Please send 82-83 Guide to Teaching Resources. Place our school on your future mailing list. (560016)

Many of the materials supplied are too slanted with company propaganda for use in science. (560020)

I like your Michigan history films!! (560022)

How about some type of training for junior-senior H.S. students allowing them to inspect households for energy leaks and recommend conservation measures, perhaps thru computer print-outs now that many schools have computers or micros. (560023)

This is not as useful to me as perhaps it would be to someone else. Most of your topics do not fit with the subject I am now teaching. (560024)

I appreciate your concern about educating students about the real world and the energy needs and demands. I also value the input sought from a portion of the population that would have target audiences. (560028)

A concise program of materials explaining the various methods/fuels of energy production and the advantages/disadvantages of each, and the role each plays for the production of energy would be a welcomed development. (560031)

The topics above were good. (560033)

The inclusion in the film can of objectives and/or questions on content of film. Continue Aware Magazine. (560040)

Broaden range of topics (senior high schools offer specific classes in science); 1. Biology, 2. Chemistry, 3. Physics--tie together and show interrelationships. (560043)

Develop learning units dealing with specific technology skills as in electronics, physics, chem. (560046)

I would be willing to talk to the people making this up and give them my thoughts as an active teacher. What about hiring teachers during the summer to look over proposed materials. (560050)

Do youhave field trips in the Adrian-Jackson area. (560053)

Avoid the "Big Business," "Power Company" point of view in all materials. Hire a non-biased organization to research all materials. (560060)

We have a lot of material to cover in a year in chemistry. I simply cannot afford to spend very much time on one topic, such as elec., gas, nuclear, etc. energy and uses. Most of that is technology, not really basic science. (560063)

Prepare more materials of higher level use. Narrower grade level application. Most present materials are for elementary or middle grades use. Science materials would be appreciated very much. (560066)

We need the facts on new available energy alternatives. I believe more education is needed by the public in the nuclear field. Only an educated public can make intelligent decisions. (560071)

Everytime I order materials they are back-ordered and I never receive them. One year I was told revisions were being made, so my choices were not available. Due to the poor response I have had for 12 yrs from your program--I decline to use my time for this. (560080)

More films of better quality (many films are very old).

Free films dealing with subject matter mentioned would be a great help. Any and all materials available pertaining to subject matter studying is used in this dept. (560084)

1) Objectivity; 2) Accessability. (560088)

"Fair" and truthful discussion of wind, solar, wood, etc. and why not for certain MI areas. Need a small "science fair" type single concept kit--one or two per order--like the 10-15 yr. ago Feromagnetic Domains" etc. (560089)

Consumer Power Company is one of the very few businesses that goes to an extreme to do a great job in educational services. Keep up the good work. (560091)

Modern 16mm films with accompanying printed material that would interpret the film in respect to local/regional areas would be excellent. (560093)

Colorful, also good clear photographs are much more interesting than drawings. (560095)

Make sure catalogs and other information is distributed to the high schools. (560099)

In the past, materials from Consumers Power Co. have not been objective enough. They have tended to use these free materials as a way of getting their side of a story told. If they're going to be in the media business and want to truely do a good job, they must present a more balanced picture which doesn't necessarily try to prove that they are the "good guys." (560102)

Topic suggestions: geology studies before you build a plant, core samples, water testing, study of shoreline, air pollution problems; research being done in Michigan; coal used in plants; use of your products. (560103)

Tell the energy picture as it is rather than the biasedness most of your films show. That's why (one reason) I stopped showing them. Check your records on my usage. By the way--I am voting FOR proposal D & H. I am also telling all my classes to urge parents to vote for proposal D & H. (560106)

Beware of industrial bias and recognize "limits to growth." (560107)

New trends in energy conservation. New trends in energy sources. (560114)

I sure hope your $$ were not used to produce those awful "Proposal D is Dumb" commercials. Power & gas company vested interests are written all over that whether mentioned or not. Scare tactics cause me to be less and less favorable to power & gas companies. (560119)

Geologic history of Mich. Resources of Mich. (560128)

Would like to see information about energy alternatives. ie., solar, geothermal, etc. (560131)

Today it is different than twenty years ago. People don't like to be managed--just present the info and we can work on the answers. (560138)

Produce films about Michigan, its problems, its assets. I'd like to see moreon the biological aspects of the fauna and flora as it can co-exist with industry. Show the positive aspects i.e. SAY YES TO MICHIGAN to our young people. (560140)

Please see my computer suggestion previous page--you must stay up to date or your materials get stereotyped. I will be glad to provide additional information if asked. (560144

Just present facts, not too much advertising, current information. (560146)

I am reluctant to use Consumer's Power materials because of the obvious bias (often to the point of inaccuracy) in some materials I've used in the past. (560150)

Computer discs would be helpful for follow-up questions--16mm film needs a good oveheaddor ditto of follow-up questions. (560151)

Avoid a one-sided soft sell--it is too often present and antagonizes the intelligent audience. It is OK to say Consumers is paying for film, etc., but let audience make the judgements. (560152)

Would like to see something that would pertain specifically to chemistry and/or physics classes that the elementary schools would find too technical to use in their program. (560156)

I dislike using any materials--free or otherwise that arenot completely objective or that are not free from commercial overtones. (560160)

The educational structure you decide to when you seek people for your company in the area of science. (560164)

How about some detailed materials on hydrocarbon combustion? (560169)

Solar and geothermal: appeal to our senses of safety and ecology. (560170)

Closer correlation to widely used earth science textbooks would make materials easily adaptable. (560171)

I would like films related to careers in electric power industry--lineman, etc. I teach electricity and electronics. (560172)

I have used a number of Consumers Power educational materials. They have been useful. On occasion I have felt the presentations are quite slanted. But I still find it useful and tell the students this is one perspective and ask them if they know of others. (560173)

Please contact me if I can be of further assistance to you. (560175)

Often the media kits are geared toward elementary. I would like some solid things geared to senior high with a colorful flare to generate interest. (560179)

The material would have to present an objective view, not slanted to any one point of view. (560183)

You have an economic interest in these areas so some bias is always present. (560193)

1. Energy workshops for teachers; 2. Videotapes dealing with energy sent to school libraries. (560200)

I would like to see a catalog of their materials. (560202)

I use a great number of Consumer's Power materials and like and use them a great deal. Keep up the good work. (560201)

The Elec. Co's. have been waiting too long for Nuc. people to put them on the defensive and are in a bind on stating the other case. (560208)